ENFORCING CREATIVITY IN GRAPHIC DESIGN

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REQUIREMENTS FOR THE DEGREE OF

MASTER OF FINE ARTS

BY

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MAY, 2002

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ABSTRACT

ENFORCING CREATIVITY IN GRAPHIC DESIGN

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Enforcing creativity in basic design is as important as giving students the design principles and elements.

During their first year all design students are taking basic design courses in order to learn those principles and elements but starting from their first year education, creativity must also be enforced.

This thesis is a research which is trying to find proper and direct ways to achieve this goal under the light of previous research and studies, with present basic design students.

Key Words: Creative process, Perception, Basic design, Awareness.

ÖZET

GRAFİK TASARIMDA YARATICILIĞIN GELİŞTİRİLMESİ

Naciye Derin Erdurak
Grafik Tasarım Bölümü
Yüksek Lisans
Tez Yöneticisi: Yar. Doç. Marek Brzozowski, Yar. Doç. Dr. John R. Groch
Mayıs, 2002

Yaratıcılığın geliştirilmesi, grafik tasarım öğrencilerine temel tasarım kurallarının öğretilmesi kadar önemlidir.

Grafik tasarım öğrencilerine temel tasarım kuralları birinci sınıftan itibaren öğretilirken, yaratıcılığın da ilk yıldan itibaren geliştirilmeye başlanması gerekiyor.

Bu tezin amacı, grafik tasarım öğrencilerinin yaratıcılıklarının geliştirilmesi için, önceden yapılmış çeşitli araştırmaların ışığında uygun ve tanımlanabilir bir metoda varılabilmesidir.

Anahtar Kelimeler: Yaratıcılık Süreci, Algı, Temel Tasarım, Farkındalık.

ENFORCING CREATIVITY IN BASIC DESIGN

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1. INTRODUCTION

1.1.Aim of The Study

In this study I will be dealing with the creative process in the basic design course. The study will be consisting of two different parts. The first part will form the theoretical background of the study and the second part will present a case study, which I will call “Workshop”.

In the first part, I will try to take a detailed look into the creative process in graphic design field, which involves various aspects such as visual awareness, brainstorming, culture pattern, and role of the unconscious. All these will be studied chapter by chapter in order to understand the creativity process and decision making in design.

In the second part of the study I will present a number of experimental projects, which are executed by first year students. These projects include elements, which are designed to enforce their creativity. Also I will present some questionnaires answered by the same group of students again. Although I prepare these exercises and the questionnaires in the light of this study, they are all controlled and surveyed by my advisor Marek Brzozowski.

During my undergraduate education at Bilkent University, Faculty of Art, Design and Architecture and graduate education at the same faculty, I have observed that the program is too much focused in teaching design principles, tools and technical facilities. In such a program there is not much of a space for innovative thought and creativity. I think this is a huge gap because in the light of this study I have surprisingly found out that creativity and innovative thought is not totally a gift, this is something that can be learned and improved if exercised.

I understand that it is very challenging for a young person to learn a totally different language in one year's time. We define graphic design as a tool for visual communication, therefore, the education and the practice of visual language is a long-term project that covers the four years span of design education. Although the education of visual language is a difficult task, if we wait for the students to write a poem with this language, we have to show them the path that will lead them.

At that point what this study basically suggests is to present the visual communication system in a challenging way, including concept development as well as the use of design principles and elements.

There is another point, which is very important. Current schedule and current exercises targeting memorization of design principles. I believe that it will be much more useful for students to discover these principles

by themselves, in the time that they are dealing with a project. Unfortunately I have seen that students feel difficulty in using design principles or tools' because the knowledge is stored only temporarily. The questionnaires that I have used in this study are the exact proof of this problem.

On the other hand when I have started to give projects that consist of "discovery and challenge" to the students, I have observed that these projects made them learn the principles and the tools and also lead them to arouse their interest in solving visual communication problems.

As a matter of fact, we can also see this study as a research to find direct ways to teach basic design fundamentals and to encourage personal creative activity.

Self-discovery and innovative thought will be the most important issues in this study. Such an approach will be useful for students not only for finding a link and use everything that they have learned in order to be able to write a poem with visual language, but also it will give them the power to make their own decisions in design process.

Design is a process of making decisions. During my assistantship I have observed that students are extremely scared of making their own decisions about their projects. During this study, in the workshop, we

also let them decide. We only gave them the necessary criticisms and observed their improvement. I believe adding such goals to the basic design education will create more self confident, aware and visually literate designers.

1.2. Introductory Knowledge About Basic Design and Basic Design Principles

In this study I will not be directly dealing with basic design or graphic design because our research title is “creativity” and also there are infinite sources on basic design, which present similar information. Since it will not be rational to repeat the same approaches here, I decided to give brief information about these notions.

First of all we have to understand the contents of a basic design course. It is simply a studio course, which aims to introduce the basic design elements and principles. This course tries to develop a general understanding of the field of graphic design, including theory, practice and technique.

1.3. Definition and Aim of Graphic Design

Graphic design is the process and art of combining text and graphics and communicating an effective message in any type of visual communication.

Graphic design is responsible of how information is communicated. The forms of communication can be printed, video, film, and electronically transmitted. Corporate identity, environmental graphics, annual reports, museum, publication, book, web-page, and multimedia presentations are examples of graphic design. The graphic designer is concerned with how communication is transferred and received, choosing the appropriate mechanism for distinctness, clarity of information, and appearance.

Graphic design is visual problem solving activity using the means of visual language, the designer conceives, plans and executes designs that communicate a specific message to a specific audience within given limitations.

Graphic design involves the transmission of information and ideas by visual means. Because of this, graphic design education is a lifetime activity. It has consistent changes in its inner dynamics and this change will require consistent renewal. It always needs flexible and curious minds.

All design students are considered to be graduated with equal knowledge of graphic design. They can only claim their difference in their professional life with their innovative thinking and creativity.

After this definition, I would also like to present a brief explanation on the principles and elements of basic design since they will be useful while dealing with the workshop.

1.4. Definition of Principles of Design

1.4.1. Rhythm and Motion

Rhythm requires repetition and therefore implies fluidity of motion. Motion can be monotonous like a staircase or with a difference of application it may be dynamic like a flying bee. Rhythm also takes place in music; it denotes regular measurement of themes and motifs.

1.4.2. Balance

When things are in balance, they are also in equilibrium. Two objects of equal weight on equilibrium will balance each other; this situation is called formal balance or symmetrical balance. On the other hand two objects of unequal weight must move in different amounts of distance in order to maintain balance. This situation is called informal balance or

asymmetrical balance. There is also another kind, which is implied balance such as balance of trade, geopolitical balance and psychological balance. Designers must strive for visual balance and unity in that case as part of the compositional objective.

1.4.3. Emphasis

Emphasis is a point of interest. An enlargement of a particular object or a detail drawing of a small part creates a point of visual impact. It can also be considered as of point of view related with the design concept. It may point the important idea. It is a method by which the designer can control the point of view of the observer and direct his attention to major and minor points of interest.

There are of course many other principles of design such as order, repetition, hierarchy etc.

1.5.Definition of Design Elements

Line is a series of dots or strokes showing motion and direction and if you want to mark between two points, it is a line segment. The places where the planes meet form a line of separation. Line can be physical, psychological or just implied demarcation such as line of fire or line of thought or boundary.

Space is the area of boundlessness, such as outer space, an enclosed area, the distance between objects, area of potential energy. Shape is usually considered as flat and bounded by its outline or outer limits. When it is used with form, we consider it as defining the borders or outline of the form. Contour and silhouette are considered as shapes. Form denotes mass and accounts for the laws of gravitation where actual weight is concerned. Form in pictorial organization is illusionistic and implied. Form can be either geometric or organic. Value refers to the lightness or darkness of things. Color systems use value as an element that helps defining and codifying color. Value is considered in terms of tints, tone and shades. Color is defined by three properties: Hue, value, and intensity. All colors are contained in white light. Objects do not reflect all of spectrum that falls on it. We see the reflected spectrum and call it the color of the object, which absorbs the rest of the spectrum. Black absorbs all colors; white reflects all colors. Color has an effect on us psychologically and has an effect on communication. Texture refers to the feeling of material and surface of the object both in visual and tactile terms.

2.Creativity in Art, Science and Daily Life

2.1.What Is Creativity

> *"The words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities, which seem to serve, as elements in thought are certain signs and more or less clear images, which can be voluntarily reproduced or combined... Taken from a psychological viewpoint, this combinatory play seems to be the essential feature in productive thought-before there is any connection with logical construction in words or other kinds of signs which can be communicated to others.*
>
> *The above-mentioned elements are, in my case, of visual and some muscular type. Conventional words or other signs have to be sought for laboriously only in a secondary stage, when the mentioned associative play is sufficiently established and can be reproduced at will"*
>
> Albert Einstein

Einstein described his own creative process with these sentences.

Creativity is not a gift. It is not the signature of god upon human. Creativity cannot be restricted only by the artistic activity; it takes place almost in all human activities. Such as all arts, science and people's every day practice.

John Dewey defines creativity as the "Articulation of inner experiences in response to outer stimuli" (1992). In that sense, gathered knowledge (data) and imaginative thinking of a person must be in perfect balance and unity for production.

It is very hard to define creativity with some dictionary explanations. In "Modeling Creativity and Knowledge Based Creative Design" Erlbaum totally denies the possibility of an exact definition. But it can still be suggested that creative artists, scientists or any other ordinary people develope forms in different media in order to articulate their inner experiences in response to their observation of the world or to certain ideas of the world.

Creativity is usually understood as a person's ability to produce something new and unexpected. Especially nowadays it is the brand of intelligent human being. According to De Bono "Creativity is a messy and confusing subject. …At the simplest level, creative means bringing into being something that was not there before … but the new thing must have a value" (1992). Creativity is the purposeful production of creative ideas in a topic area, followed up by deliberate effort to implement some of those ideas. Also creativity involves both the process and product of unprecedented or novel perception, thoughts, or actions.

Intelligence, training and experience are some of the necessary conditions for creative process, but they are not enough. The potential designer must also be open to experience, observation. He also must be able to develop novel concepts. (Erlbaum, 1992)

Graphic design as a medium of communication especially needs to transmit knowledge/information. Therefore the creativity within or creativity as the ground of the project provides knowledge.

The project in that sense is not referring to emotions or ideas that have been expressed, it rather communicates knowledge about the experience of ideas or emotions or situations. It is almost impossible to define creativity exactly with a list of specific and unchangeable attributes of a person. It is simply because there are unlimited number of variables that can be associated to creativity. It will be clearer to try to define creative process instead of creativity by itself. (Erlbaum, 1992)

Graphic design is a process of problem solving in its very basic terms so it automatically requires production of new ideas as well as giving the necessary information within some limits.

2.2.Creative Process

Creativity is only the ability to perform creative process. Problem solving is the common aspect in creative process and also it is the very basics of design.

Creative process contains certain phases. The first phase can be described as data gathering. In any kind of creative activity, the person

who deals with a problem must collect information and facts about the current problem. This phase can also be called as preparation. By the help of the knowledge that has been collected, the subject can analyze the problem from different points of view.

The second phase is called subconscious organization. This phase is active in all of us but most of the people are not aware of it. It is not an active phase in other words one must not strive for it to happen. It happens while the subject is not concentrating in the problem, but while doing things other than that. For example while watching television or sleeping.

The third phase can be called as illumination, it can be described as the sudden appearance of the solution, or recognition of the solution.

The forth and the last phase is verification, it is detailing the solution by comparison and seeing if it carries all the requirements of the problem.

Within all these phases a strong internal motivation is needed in order to start and perform this process. Of course there must be degree of satisfaction derived from this performance and from the final product or result.

The satisfaction can be different for each person. Internal motivation, in its very basics can be described as the satisfaction derived from success.

In psycho-physiological terms, creative process can be understood as production of something new from existing knowledge, experience, memory, observation, everything that the brain stored up to that moment. (Erlbaum, 1992)

The process does not require creative personality. It can happen in all time, to every person. There are only different appearances and media of creativity. For example, a housewife can find out that the perfect refrigerator cleaning material is acetone and on the other hand a painter can create a new form of a window in the world. Almost all kinds of children's game are creative as well as the mad man's self talking.

I have already used the term imagination like a synonym of creativity within this chapter but all imagination cannot be considered as creativity.

2.3. Creative Process and Brain

After facing a problem, a creative mind looks to it from different points of view. This situation is called lateral thinking. It is, in other words "not digging the hole deeper but digging in a new place" (De Bono, 1967).

There is some creativity enhancing techniques like brainstorming. This process happens in a form of producing many partial solutions and creating new connection lines between unrelated things. Like what happens while sketching for a project. Step by step, the views that are different from each other, will be enlarged and finally they will cover all necessities of the problem and form a unity that is the solution.

In that sense, if we want to understand the mechanisms of the mind, we have to understand the functional physiology of brain. This is also the direct way for us to understand human behavior, including creativity.

The neurons in the brain are the neural cells. They are responsible of information processing. Each cell takes many inputs and produces one output. The topology of the whole network is formed in the childhood and remains almost the same after that phase. In the network the connections have the tendency to reinforce when both connected cells are activated simultaneously. This principle gives the network the ability to organize itself while working.

Brain cells can act as mediating processes, they can make associations. Groups of neurons can stimulate each other. They can form feedback loops. Their loops are essential for any cognitive process.

Cognitive learning forms are: self-organization, conditioning, attaining knowledge. Attaining knowledge can be performed purely internally. It also corresponds to the definition of creativity: New patterns are formed from existing ones. (Gardner,1982)

Information of the environment is transmitted to the nervous system through sensory organs. They are received by the central nervous system. In that sense “Perception is an active process including search for elements of information, their comparison, creation of hypotheses concerning the meaning of information and verification of these hypotheses by comparison with original elements. It is heavily dependent on the overlapping zones, which are located mainly in the frontal lobes of brain cortex. They are considered the place of higher mental processes. The frontal lobes are found essential in creativity” (Luria, 1973)

At an other part of the brain, in the limbic system there are other areas. This system can cause pleasure or displeasure. It has a role as motivator. It is responsible of finding new potential problems and feeling satisfaction when a problem is solved. It is in interaction with the frontal lobe.

While dealing with creativity in graphic design, we also need to deal with two halves of the brain. In the brain, the left and the right hemispheres have totally different functions. The left hemisphere is responsible of linguistic abilities, such as speaking, reading or writing. Scientists

reached into that conclusion by making studies on brain damaged patients. They have understood that the left hemisphere has a preference on linguistics. On the other hand the right hemisphere seems happy with various kinds of non-linguistic stimuli, for example sets of dots or unfamiliar human faces.

In that sense right hemisphere is activated when individual needs to solve a problem requiring visual and spatial analysis. The right hemisphere is more active and important in spatial tasks.

The left hemisphere is responsible of language and classifying objects into standard, linguistically defined categories. On the other hand, we need right hemisphere while finding our way around at an unfamiliar site or while mentally manipulating the image of two or three-dimensional form. It is also responsible of recognition of faces.

All children in the world, between age of seven to eighteen are having a language based education, it means that their left hemispheres has a heavy duty while the right hemispheres is on vacation. In that sense children before primary school has surprising artistic abilities. It means children before literal stage use their right hemispheres in a more active way. This is the age that they are far away from category boundaries like collecting, grouping, naming images and putting in order all kinds of standards that social life requires in their minds. By the age of six or

seven, children becomes aware of the standards of their culture. Before that he used to know or learn the world directly.

Creative artists also pass through the literal stage. But they negotiate with it in great rapidity so that by adolescence they were already creating works of high quality.

Another example that shows the literal activity, as a boundary upon artistic activity is the condition of brain damaged painters. A study made on these patients showed that after an injury that effected the left hemispheres, most of them became aphasic (unable to speak) but on the other hand their artistic abilities improved. (Garner,1982)

It is of course impossible to keep first year students away from language but we can force them to improve their drawing and sketching skills, this attempt will force them to improve their artistic and creative abilities. Since this study showed that there is a direct connection between the activity of the right hemispheres and artistic ability, basic design students have to focus on the visual and stay away from the literal at least during the studio hours.

2.4.Creative Process In Design

I have already mentioned that visual awareness and data gathering are necessary tools for creativity but they are not sufficient for all the times. These notions are necessary for problem solving and necessary for us to make sense of the world that we live in and make sense of the experiences that we had. But we also need to enhance and encourage creativity.

A suitable ground for design students must be found for the act of creation. They must both learn to collect knowledge and to develop their level of creativity.

It is a fact that human beings are possessing different degrees of imaginative powers. Nobody is equal to another. But it is also a fact that every person can find a proper way to develop his talent. Creativity is a state of mind to be nurtured and exercised. Dealing with various concepts and ideas on a design field is the best way to enforce the creative activity of a basic design student.

Sketching, finding new compositions and alternatives including various concepts related to the current problem are direct ways leading to creative solutions. In other words, the first possible solution is never enough but you have to continue searching for other solutions.

Also focusing into one point of view must be eliminated. Such an act will only limit the imagination and prevent the person looking at that problem from different viewpoints. In fact all kind of limits upon student's imagination must be eliminated.

According to Freudian theories, the motivating force of creativity is coming out of a person's need of filling his feeling of imperfection. Every person is building solutions to compensate their losses in their life. They often do it by recreating the lost object in another form. This action begins in the childhood. Human being begins his creative activity by playing with toys.

It is clear that creativity can form a suitable ground for a graphic design problem. Creativity gives designer the opportunity to form something totally new. At that point, specific aim of this study becomes very clear. It is simply "teaching creative problem solving".

3. Visual Awareness

3.1. Perception and Image

Observation and visual awareness are very important aspects on the path leading to creative process in any kind of medium. Creativity and production would be impossible if there were no observation and experience of the world.

We all fold images around us in order to make sense of the world that we live in. As time passes by, we categorize these images and we store them as common knowledge. After that learning and storing period which, mostly happens in childhood, all human beings turn out to be “blind to change”, because we only perceive the part of the environment that we are focused. Other objects and events around us stay under a foggy layer, we do not pay any attention to them.

The same situation occurs while hearing voices. We only hear some selected voices and for the rest we act as a deaf. The brain and the perceptive organs cause the partial blindness and deafness that we are experiencing during the whole lifetime. This state is called “ brain’s selective perception”. Our brain makes selection among everything around us because it simply has to protect our balance in life. Imagine an environment in which we see everything at once, all lights, all colors, all

motions, everything in focus and clear, plus all noises and sounds. This would be nothing but a hell on earth.

Scientists in USA have developed a bionic hearing device for deaf people. What they basically do is to put a microchip to the inner ear with an operation and link it with a small microphone. The patient has to place the microphone inside his ear. This is a big development for deaf people but each patient who carries the device had the same problem. They had to turn off the microphone outside because the device is unable to make selections like the ear does. The patient was hearing every single sound and it is unbearable. It is working perfectly in the indoor but outside in a city center is very noisy so the device has to be closed.

To prevent such a torture our brain and perceptive organs make selections. They select the situations, the objects and the sounds to pay attention. For the rest we are all blind and deaf.

The structure of the eye helps that selection because the eye cannot stay focused to everything at once. It focuses the field of interest and the rest will be out of focus.

The evidence of this selective perception is in the questionnaire that I gave to the first year students. In the question number six, I asked students to draw the outdoor lamp at the entrance of building B of the

building, in a very simple way. Only four students out of forty-two managed to draw the lamp in a correct way and the rest could not. The most interesting thing about this situation is that the students are looking at that lamp at least twice a day because they enter the building once in the morning once after the lunchtime. That means they might have looked at it hundreds of time in one semester.

We obviously see in that example that looking and seeing are not the same thing. The students simply stay blind towards the lamp because they are not paying any attention to it. Everything that is out of interest is invisible for human being. Since we categorize too many things as common knowledge or as a part of cultural pattern, all those things will stay invisible because we already learned and stored them. There is nothing interesting about them anymore.

When we start to store the world in mind, another part of our brain starts to work. This is the imaginative part of the brain. In other words while the "occipital lobe" which is responsible of vision is working, the brain forms the images of the pictures that it collects. Imaginative sequences are additional images to learn and apprehend. (Moravcsik,1998)

Imagery and perception centers are in different areas of the brain. In that sense social pattern is a two way street. We see things and learn, after that we make an analysis of these pictures and produce our own

standards and shortcuts of these pictures and finally they turn into images in our minds.

Sometimes making researches on brain-damaged patients can help scientists to solve mysteries of the brain. A group of scientists in England proved that the images recorded in the brain and visual perception are centered in different areas. The patient had a trauma at the right hemisphere of his brain and faced a very extraordinary condition. He was unable to identify objects. He could recognize faces, he could read and see but he was unable to say that this is a table when he encounters a table. After some tests scientists surprisingly realized that he was able to draw the objects that he was unable to recognize. They gave him a written list of objects and the patient draw them one by one. After that stage, the scientists scanned patient's own drawings and showed them to him, he was again unable to recognize them. (Gardner, 1982)

This case shows us the huge difference between the perception and making images of that perception. The patient in that situation was using the stored knowledge of the perception while drawing although he is not able to perceive the world anymore.

3.2. Common Knowledge as a Boundary

Even if some changes occur in the environment, the person may not be aware of it. Because human beings fold the images in order to put the world inside his head but even his common knowledge will remain "common", imagery and perception is personal. That is the reason of its being very important for the creative process.

Every kind of creative process begins with sensory perceptions of the world. Common sense or knowledge or cultural pattern can be a boundary upon the creative process.

All physical objects that we perceive are around us and they are in our minds at the same time as images. This is what we call common knowledge. Every healthy person acts according to a common knowledge that the sensory organs build for him.

Every healthy person acquires images and sounds by the help of their sensory organs, nerves and brain. The image or the sound received by the eye or the ear travel along the nerves and finally reach to the related part of the brain as electrical signals. There, they become an image in the mind. Every single information that we get about the world is the result of these electrical signals transmitted along the nerves. They all reach to the brain so we can consider the brain as a central receiving station

which transform these shapeless electric signals into images We also can consider every object around us as broadcasting to us.

Since we all have the same sensory organs and since we are all living in the same world, we can say that our senses limit our view of reality, total perception of the world. The situation becomes more pessimistic when we add the selective perception and change blindness into the picture. At that point it would be clarifying to give an example.

"There was once a fisherman who was a keen observer of nature. He observed and after twenty years he suddenly realized that he had discovered a law of nature. The law of nature was that all fish are longer than four inches, but the reason of it was that his net was a four inch net"

Eddington (1987)

We all need perception of the world and imagination in order to develop the picture of reality.

Design students must be aware of their limits in perception. They must be all time observers. They must get rid of their blindness to change and be aware of selective perception, because observation is their main source of data gathering. They must observe everything around them: Shapes, textures, light conditions, etc. This is the only way for them to form their visual language and enlarge their visual vocabulary. They must sort different things out of common and the most important of them

all; they must learn to see rather than only looking. This is how their visual literacy will start to function in all means. Since perception is a two way road, since we all manipulate the common sense with our imagination, the more they observe and gather data, the more they can form images to communicate visual.

3.3. Vision and Environment

What we see also depends on how we learn to see. In order to reach useful visual vocabulary, aiming creative design process, basic design students must learn to open their eyes and their minds. This can only happen with a process of visual re-education.

Human beings are all taking a visual education in the phase that they are classifying and storing images of the world. Unfortunately, inevitably and normally in the first hand they are manipulating their storage with their imagination. But they also perceive already manipulated images. Because we are living in a world of clichés. If you do not encounter the elements of visual form, nature and their different situations and conditions at first hand it means that we will have to stop in front of the barrier of these clichés and already manipulated images.

In order to reach a state of visual awareness and creative potential development we have to get rid of this influence of the environment and

trust only to the vision. The most proper words to define the human condition in the environment are that the man lives in a second-hand world.

The world or the environment is already processed because between the perception and the consciousness and the material world there are two other elements. These are communication and design. These two elements are the reasons why it is almost impossible to have direct and pure perception of the environment. It is of course impossible to eliminate these already existing elements but the potential designer must be aware of it. It is impossible to distinguish the image from its source under these circumstances. If the designer is not aware of this condition, he will automatically fail to see the world that he is living in. This condition is standing between man and events, between the meaning and images.

The eye is blind to what the mind does not see. This is a solid truth ahead of every designer. So the designer needs extra attention to everything around him. Ideas, concepts, structures, process. He must not go on with the stored knowledge that he collected since his birth. He must pretend as if he sees and observes everything for the first time.

For that reason the designer must be extra careful in his perception. He needs to observe the environment in the first hand and use this knowledge to solve his visual communication problems.

4. Workshop

This chapter is the initial part of the thesis. I prepared five experimental projects to be assigned to the basic design students during one semester. I decided to put them into a form of classwork, which would take two hours of studio time, but before starting to give the projects, I have seen that it would be useful to form a questionnaire, which can show me the problems and the level of the design students. I gave this questionnaire in the beginning of the second semester. The questionnaire has a classical form. Below I will show the questions and the most frequent answers and some statistics. Forty-two first year students have answered this questionnaire.

4.1. QUESTIONNAIR NO 1

1- Do you think that you are brainstorming for each project?

%87 of students said “yes”

%3 of students said “not always”

2-Do you find basic design projects creative?

%83 of students said “yes”

%7 of students said “sometimes”

3-Do you use your creativity in those projects?

%59 of students said “yes”

%41 of students said “sometimes”

4- Are you a good observer?

%75 of students said “yes”

%25 of students said “not always”

5- Are you using your observations in your projects?

%70 of students said “yes”

%30 of students said “sometimes”

6-Please draw the outdoor lamp in the entrance (B) of the building in a very simple way (use the back of the paper)

Only four students out of 42 could draw the lamp in the correct way

7-Do you think that you have learned basic design principles in your first semester?

%55 of students said “yes”

%45 of students said “no”

8-Please write down four of these principles

Only five students had the correct answer to this question. I want to give some examples of the wrong answers.

-Forgotten

-Craftsmanship, making sense, basic shapes

-Being creative, giving on time, having principles, obeying rules

-Clean, successful, in time

-Not much detailed but explaining the topic, not opens composition

-Red element

-Being clear, direct, clean, organized, simple and meaningful

-Observing, thinking, feeling

9- Please write down four basic design elements.

Only three students out of 42 had the correct answer to that question. I want to give some examples of the wrong answers.

-Triangle, square, circle

-Papers, colors, curves, rulers.

-Black & white paper, spray mount, cardboard, cutting knives

10-Are you having difficulties in making decisions about your work.

%83 of students said “yes”

%7 of students said “no”

The answers given to questionnaire are not so bright. They show us that the students are not able to use the knowledge that they derived from one studio in another one. Although they have studied the topics in the questionnaire, they cannot remember or name them. The main reason of this situation is lack of interest during the studio course.

It may not seem important to have the verbal definition of basic design issues but it is important as a matter of fact because this is the direct way of combining data about different conditions. This is also the way of making sense of the issues covered and the way of being aware of them.

According to my observations, the lack of interest starts after the third week of basic design education. Students come to the studio with big expectations from the projects. They think that they will start designing book covers, posters in bright colors but the projects that they are facing has nothing similar with that expectation and it can not have. All they are dealing with are black and white colors, dots, lines, rectangles, and triangles. Because of that condition, they become disappointed and

bored. After a while they loose their joy, motivation and interest in the projects. They just do whatever the instructor tells them to do and do not dig deep about the matters. They also cannot link one issue to another for the same reason. So the first thing that we have done was to change the form of the projects but still sticking into principles. The goal here was to keep the projects more interesting, challenging and attractive.

The methodology followed in this study was almost the same for each exercise. The contents and the elements of the projects were different but the methodology was enforcing creativity by enforcing brainstorming, by keeping a creative pause obligatory. Creative pause means giving a pause in thinking process in order to look for another way of solving the problem. (De Bono, 1992) Challenge is another important technique in encouraging creativity. Challenge has been encouraged by sketching; it is necessary in order to avoid producing only one solution to the problem. Looking for alternatives was another technique, because the very essence of creativity is the search for alternatives. I also gave some concepts of the project or in some cases students had to build their solutions on a conceptual basis. “Concepts are extremely important in creative process because every concept has to be put into action through a specific idea” (De Bono, 1992)

I followed this path while dealing with students during the studio course. Each project and result it’s presented in the next chapters.

4.2. CLASSWORK NO 1

As I already mentioned we have decided to give experimental projects especially designed for this study in the form of class works. Class works had to be done in two hours time, in the studio. In order to make students understand that it is important to work hard for the class works, we also decided to grade the final works. Grading in that sense is the most effective way to make students understand that they have to take these projects seriously. Classworks had to be finished in the studio because we wanted to see every sketch that they have done and support them with criticisms. As a matter of fact I realized that students were afraid of sketching in the studio, in front of the instructor before this program has begun. They preferred to make the sketches at home and to bring them to the studio for discussion; the number of sketches that they were bringing in was never more than ten. But in this program they were obligated to sketch in the studio and at first it was very difficult for them. Some of them even were trying to hide themselves while sketching. We never told them what to do or which sketch to choose instead we gave them necessary criticisms, which can guide and lead them in to a successful and creative design. In order to be able to observe them during the design process we never allowed them to take the project home.

The students all had a time limitation so we did not ask them to make a perfect execution. They had not got time to make a clean and careful design, for that reason all the works stayed in a level of a good sketch, which was enough for our purpose. Our purpose was to lead them to innovative thinking and visual awareness. Also during that study we have seen that we have to make the students carry the knowledge that they had from one studio to an other. Perfect execution is not the most important issue in that case.

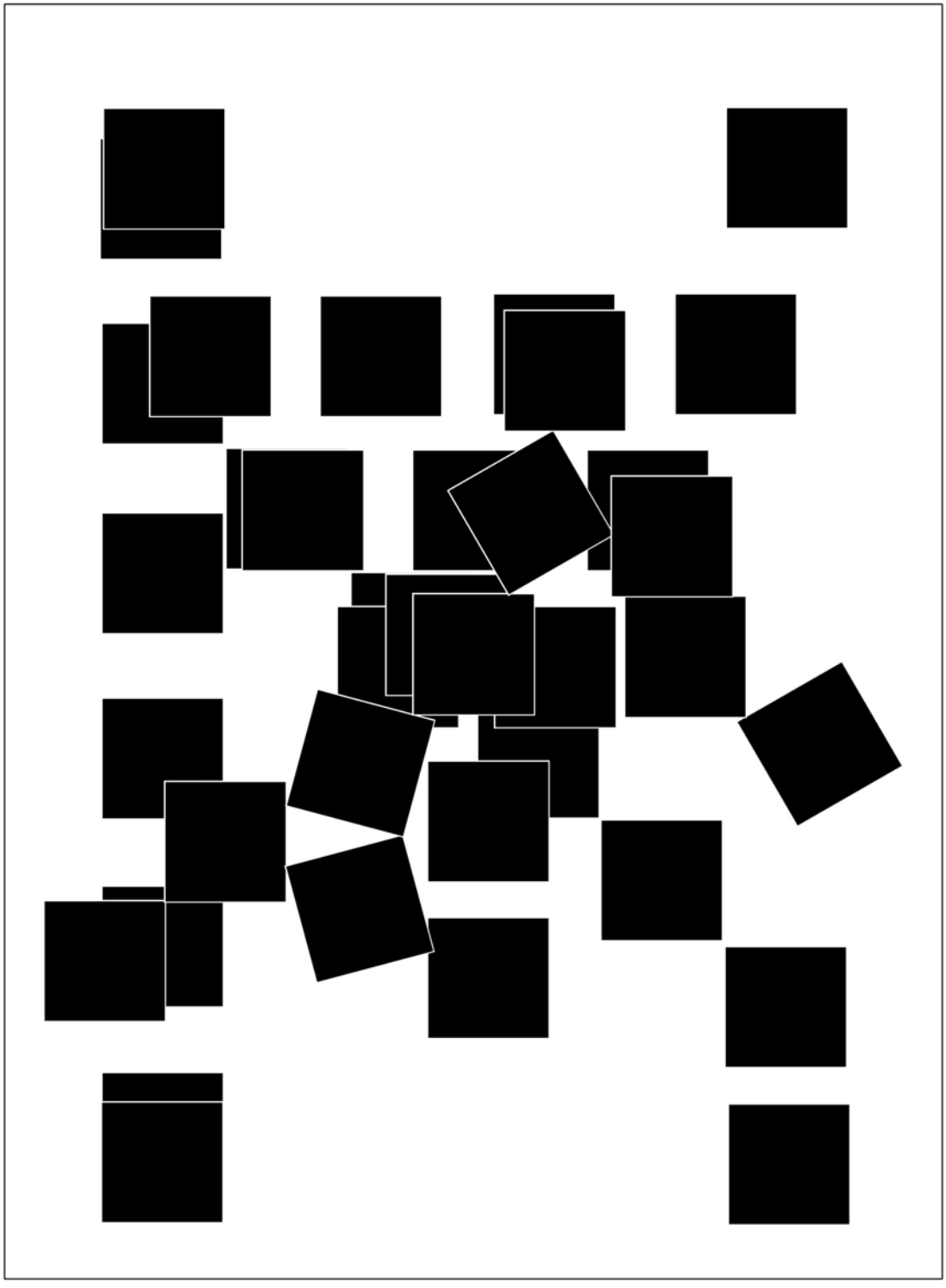
In the first classwork, which, is described in the next page, the project was designed in the form of a puzzle. Students had to form compositions showing order, growth and tension as principles of design but they had to follow a different path than what they used to previously. In this exercise the previously prepared compositions expressing order, increase and tension are already taking place in the project description and they are already designed. They are in the form of layers placed on top of each other. In other words the solutions were already prepared and they were overlapping. Students had to find the composition of purpose by discovering the very layer and by eliminating the rest.

Encountering with squares, triangles or lines was not new for students but the way that we put the problem was very interesting and unusual so students automatically found themselves interested in the problem because they were solving a puzzle, basically they were playing a game.

On the other hand they were trying to discover the correct solution. Self-discovery is very important in education. The main purpose of this exercise was to lead the students through the process of self-discovery.

The success rate of the class work was %60 to %40. Second year students have done the same project and the success rate was almost the same.

Since it was a puzzle, students showed an extra interest to the exercise and tried to look each other's solutions too. They compared themselves with each other.



CLASSWORK NO 1: Please take 3 A3 paper, black paper, scisors and glue. In each of these papers show us one of the following concepts by erasing the unnecessary squares that you see above
1- ORDER 2- INCREASE 3- TENSION

Figure 1

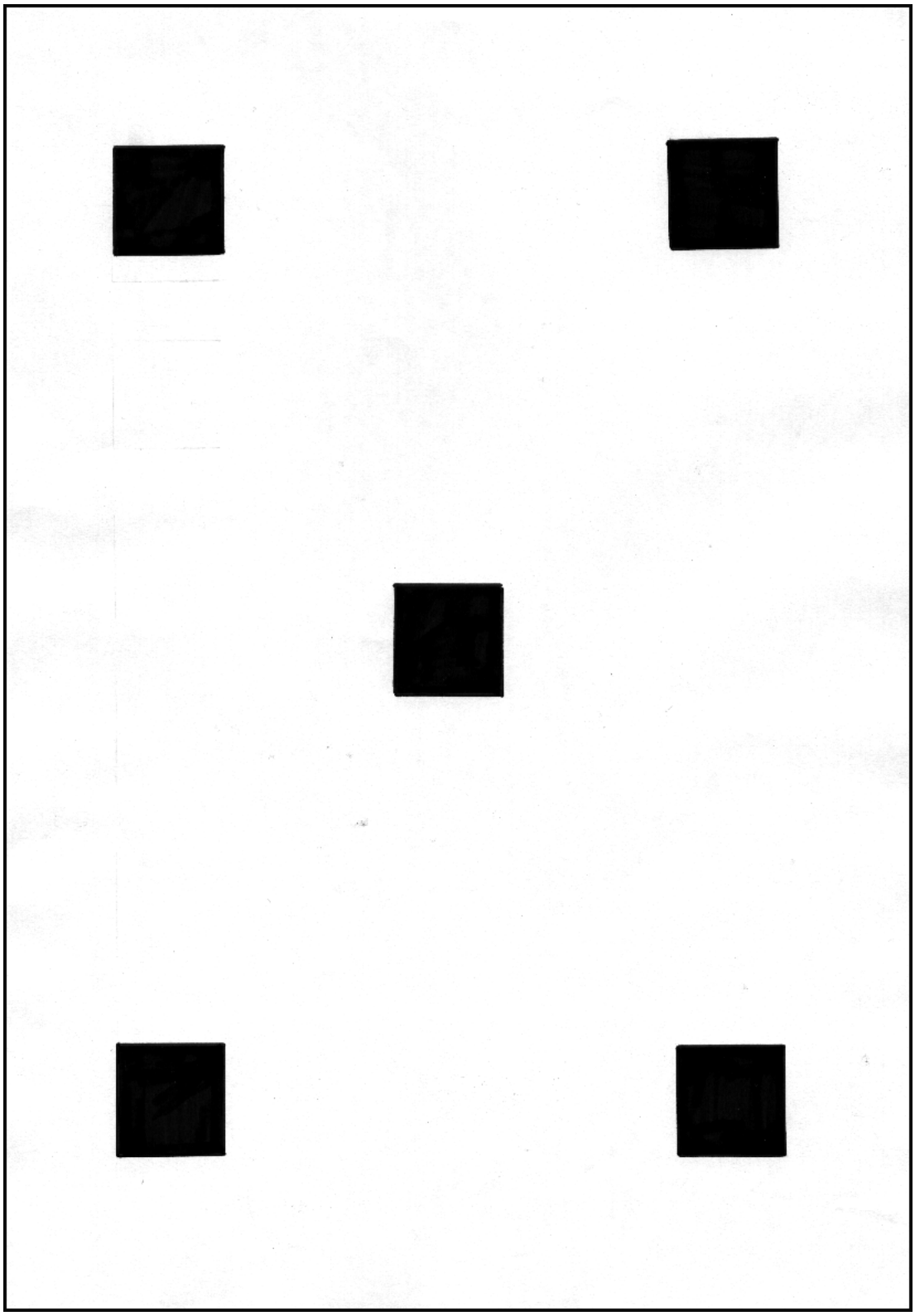


Figure 2

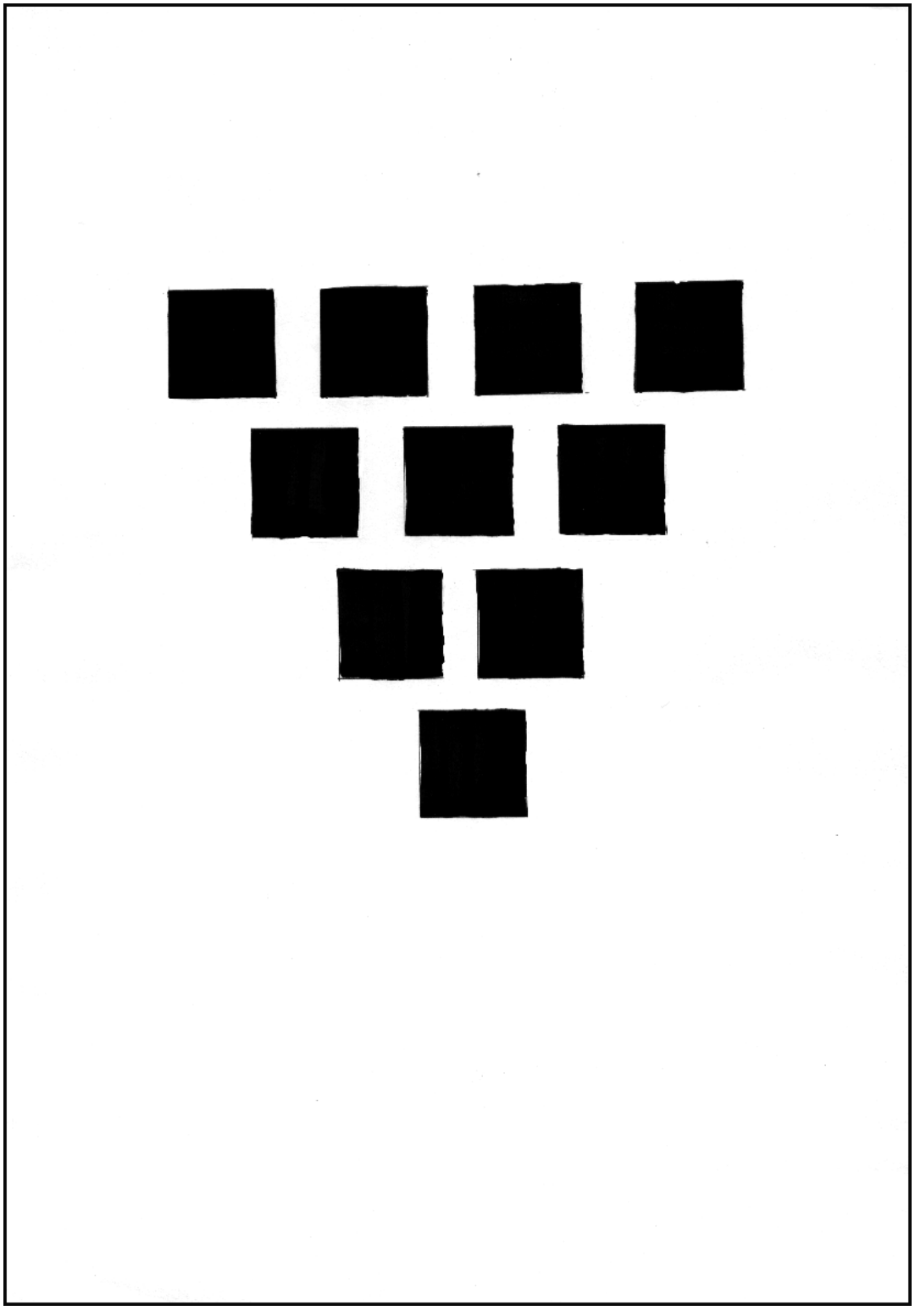


Figure 3

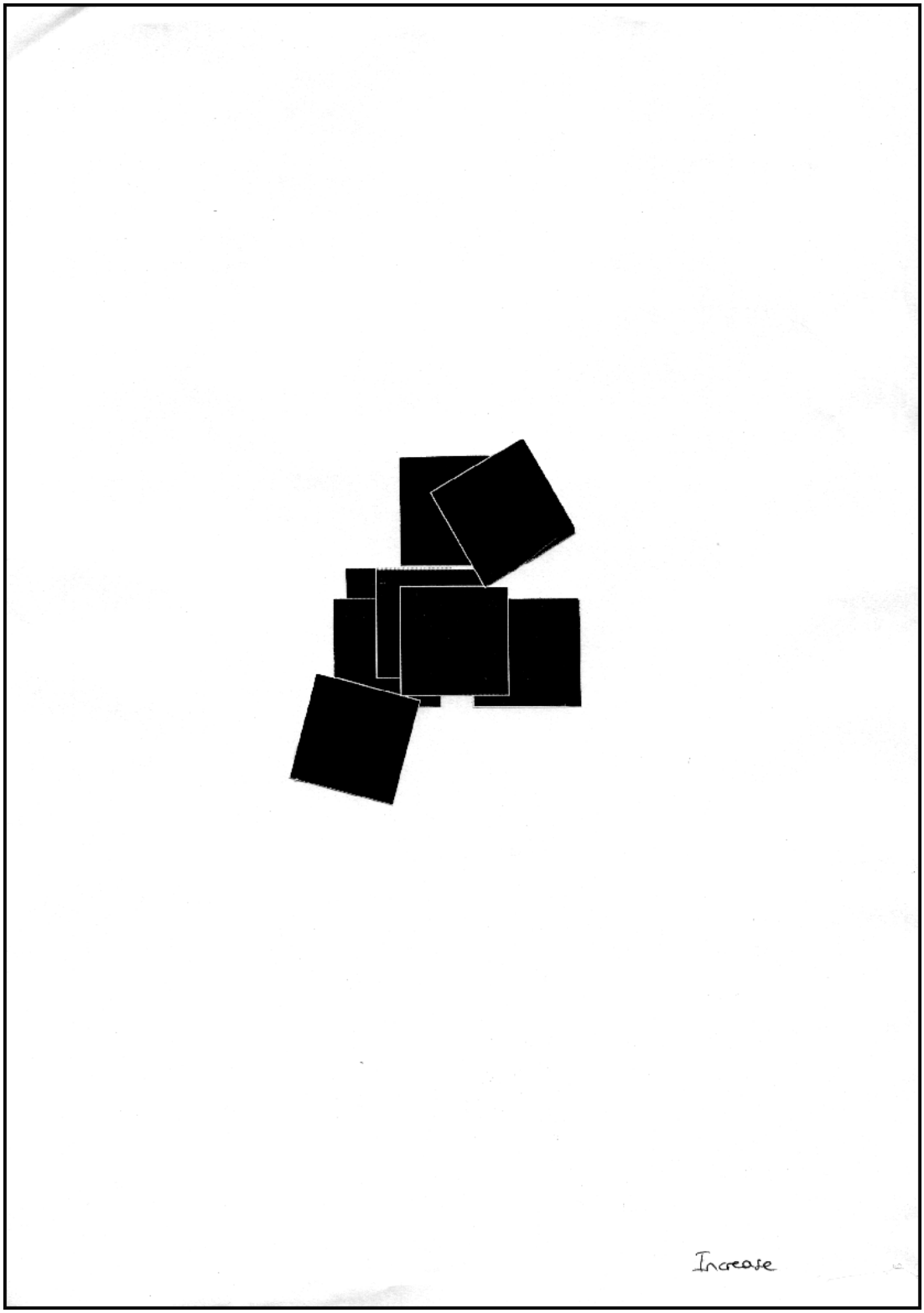
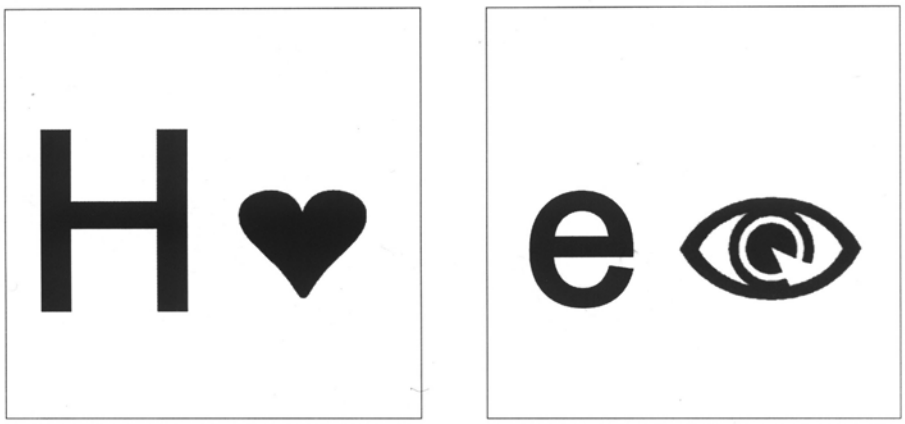


Figure 4

4.3. CLASSWORK NO 2



CLASSWORK NO 2: In this task you have 3 elements to use. One typographic element, one icon and the background. Create a composition by using these 3 elements. Concider following design principles: size and medium. You can use one color that you choose,black and their shades. Please make 2 compositions on 25x25 cm.

Figure 5

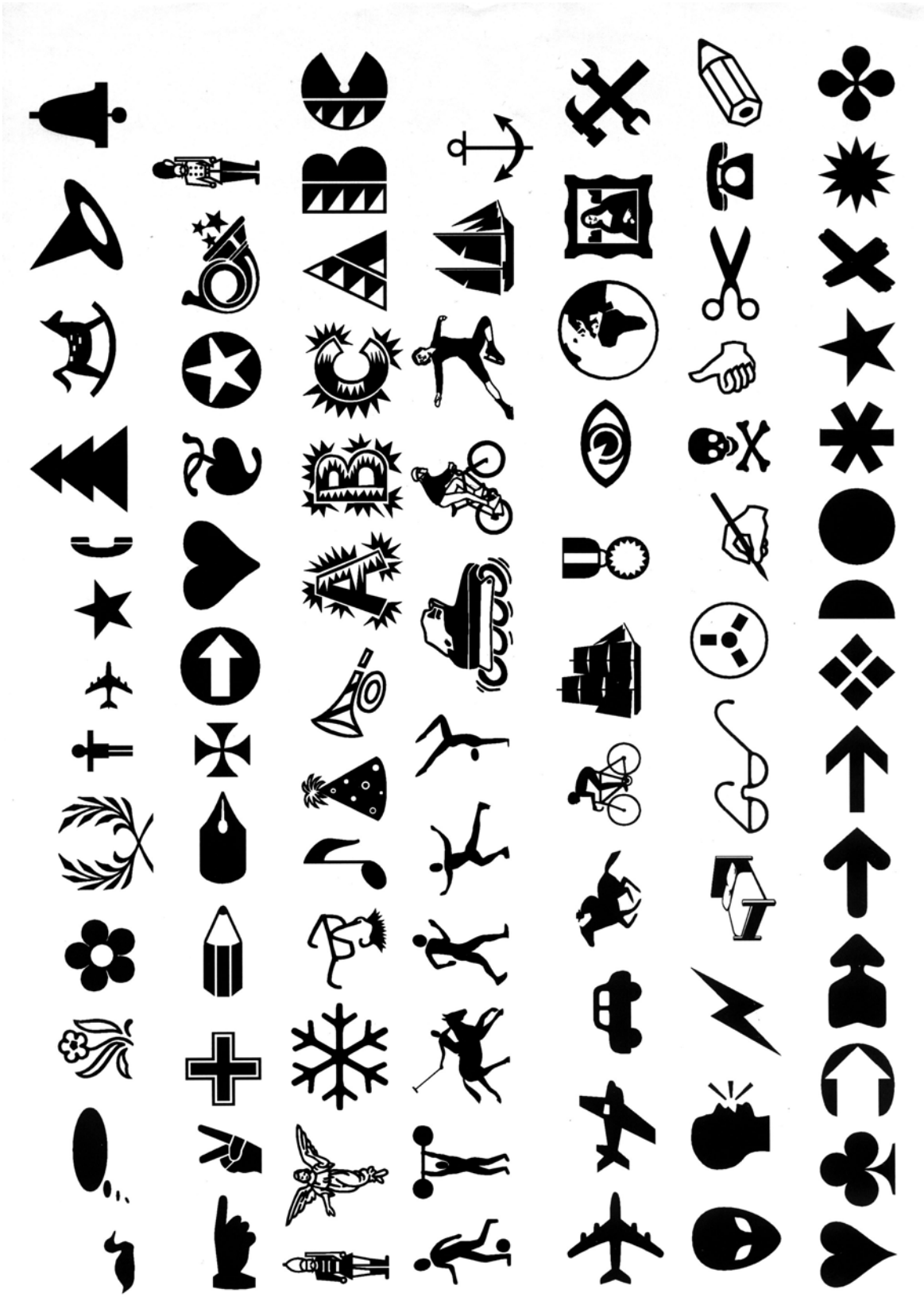


Figure 6

In the second classwork, the problem was to create a conceptual relation between a letter and an icon, besides students were supposed to use the background as a design element.

The purpose of the exercise was to lead the students into conceptual thinking and creating links between unrelated and totally different elements. Also they were obligated to face the negative space problem, which is extremely important in two-dimensional design field.

On the other hand in order to make them understand the meaning of “visual vocabulary” we gave them a set of icons as an attachment of the project, as you see above.

They were allowed to use these icons while creating the composition. Or they could create their own icons, which was a difficult work when we remember that they had only two hours to work.

The success rate in that case was again %60 to %40 in terms of creating the conceptual relation between the letter and the icon but none of the students managed to use the negative space as a design element, it means that we could not completely reached our goal in this exercise.

Figure 7

Figure 8

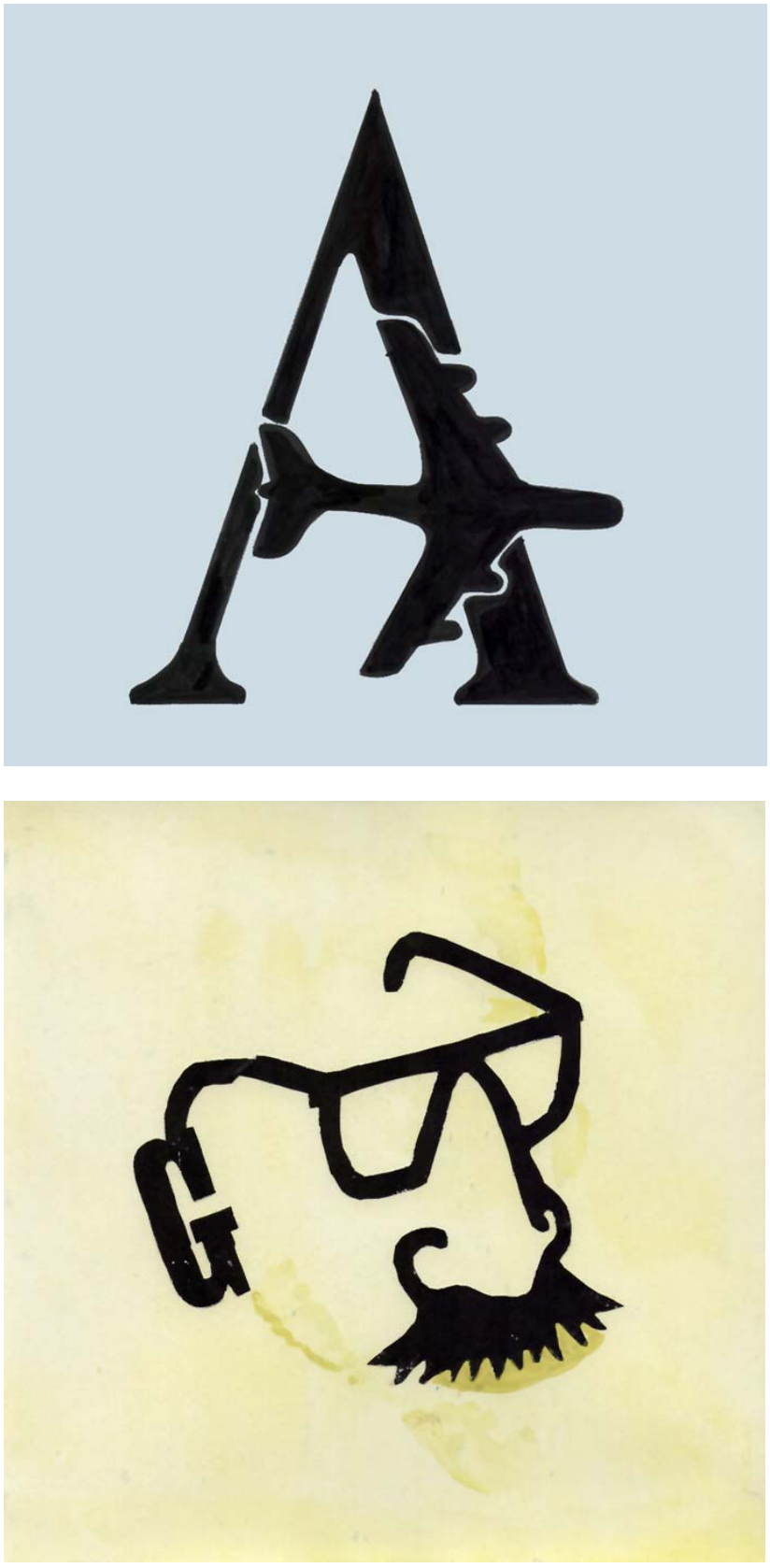
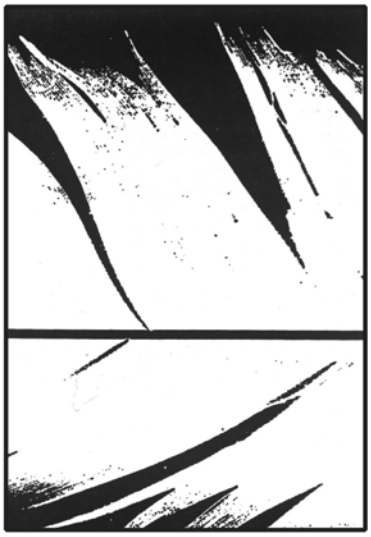


Figure 9

Figure 10

4.4. CLASSWORK NO 3



CLASSWORK NO 3: In this task you can use only black and white.
Create a shape only by using negative space. The topic should not be drawn.
The image may be cropped to show only a portion of the object.
The white ground should be transformed into subject.
In this case the traditional image making process is reversed.

Key Words: Cloud, ghost, smoke, steam, salt, sugar, milk, cotton candy.
Make 2 compositions on 25x25 cm.

Figure 11

The third class work was a direct exercise targeting the use of negative spaces. Students had to use the negative space as the subject.

When I announced the project in the studio, it caused chaos because the exercise seemed very difficult to the students. I had the impression that the negative space problem was their worst nightmare. When I mentioned that they were not allowed to draw any kind of border or outline with pencil the situation became worst. They had to start painting directly with brush in an expressive way. But once they have started sketching many brilliant solutions started to appear. They were working with tick brushes so that they were making many sketches in a very short time, at the end of the first hour they started to enjoy the exercise because they saw that a lot of successful projects appeared and they were satisfied with it. The class work started with complains but ended with joy.

Though they were dealing with difficult subjects such as ghost, milk, sugar almost all of them has found a proper way to express it. The success rate of the project was %80 to %20. Second year students worked on the same project and the result was very satisfying too. At the end of the second hour students mentioned that it was an advantage to make many sketches of every single idea in order to find the successful solution.

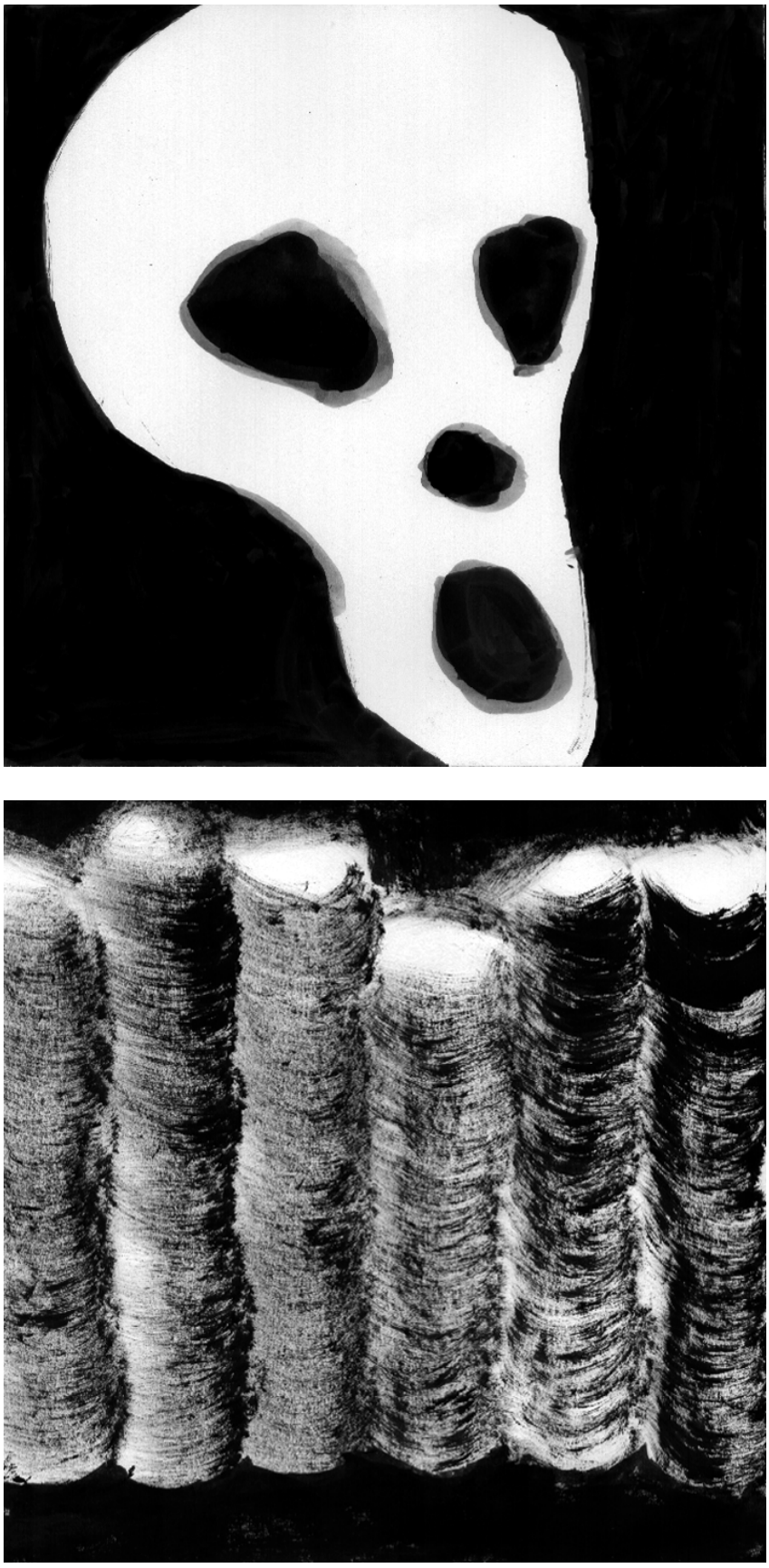


Figure 12

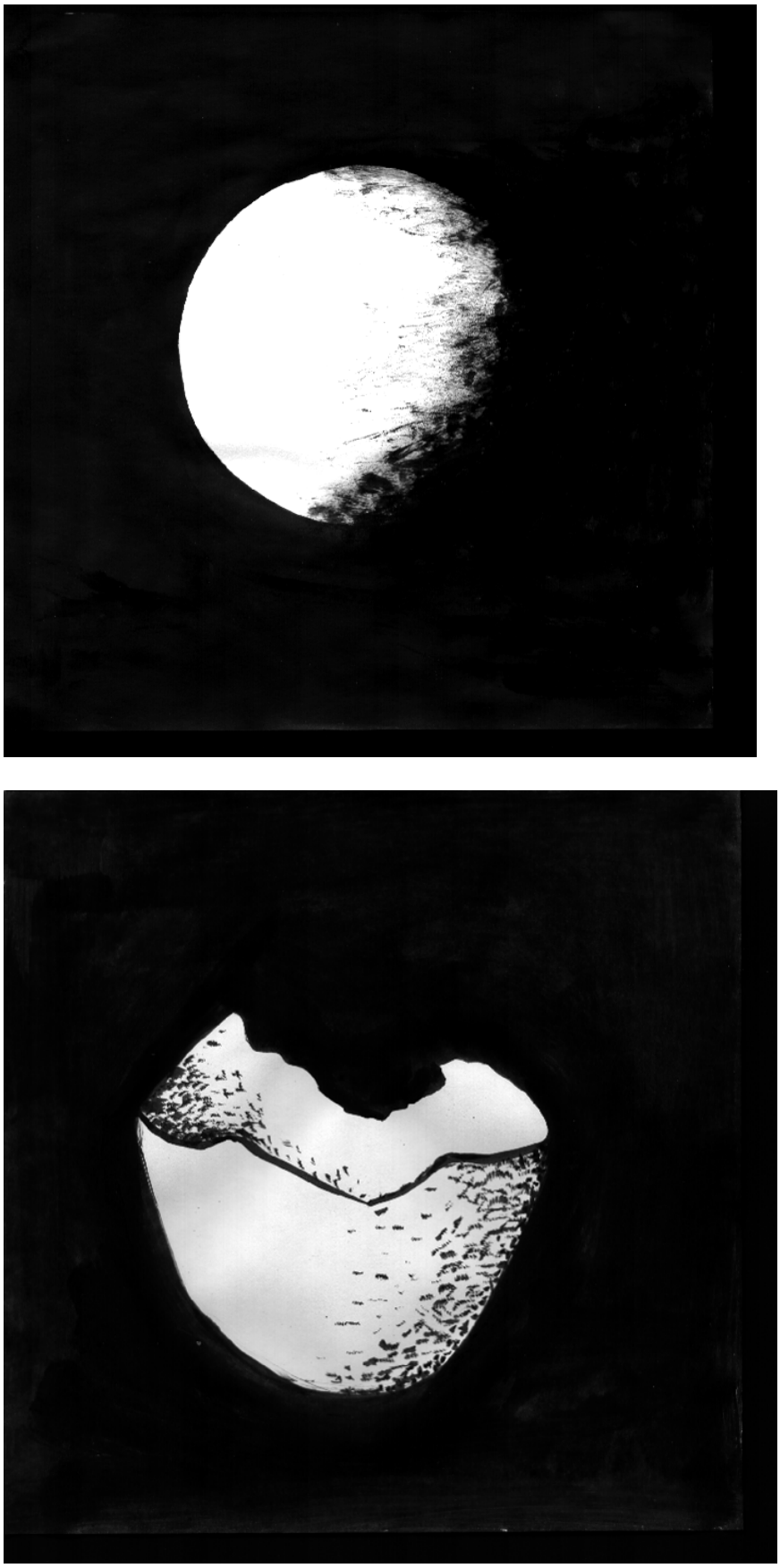


Figure 13

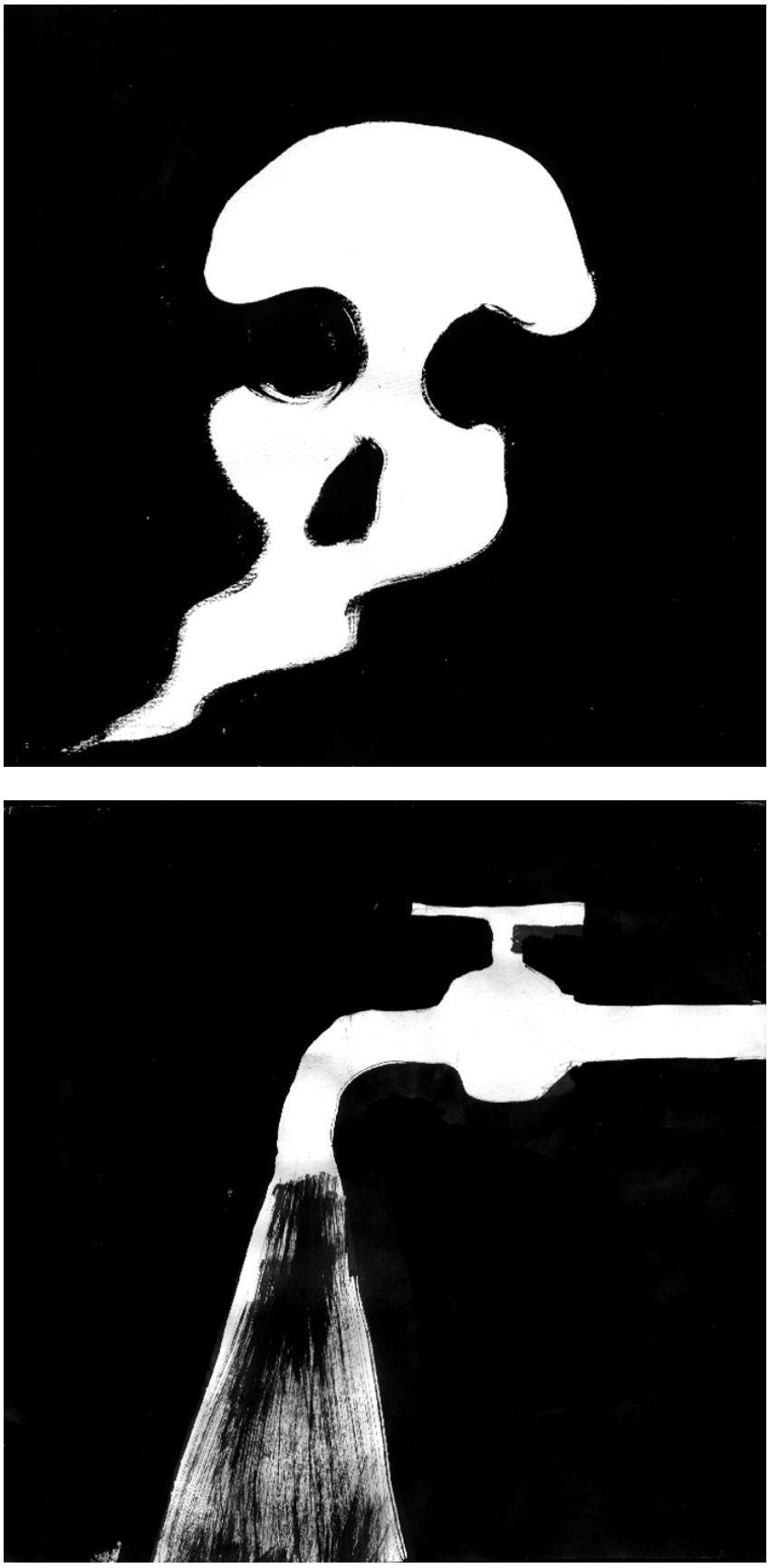


Figure 14

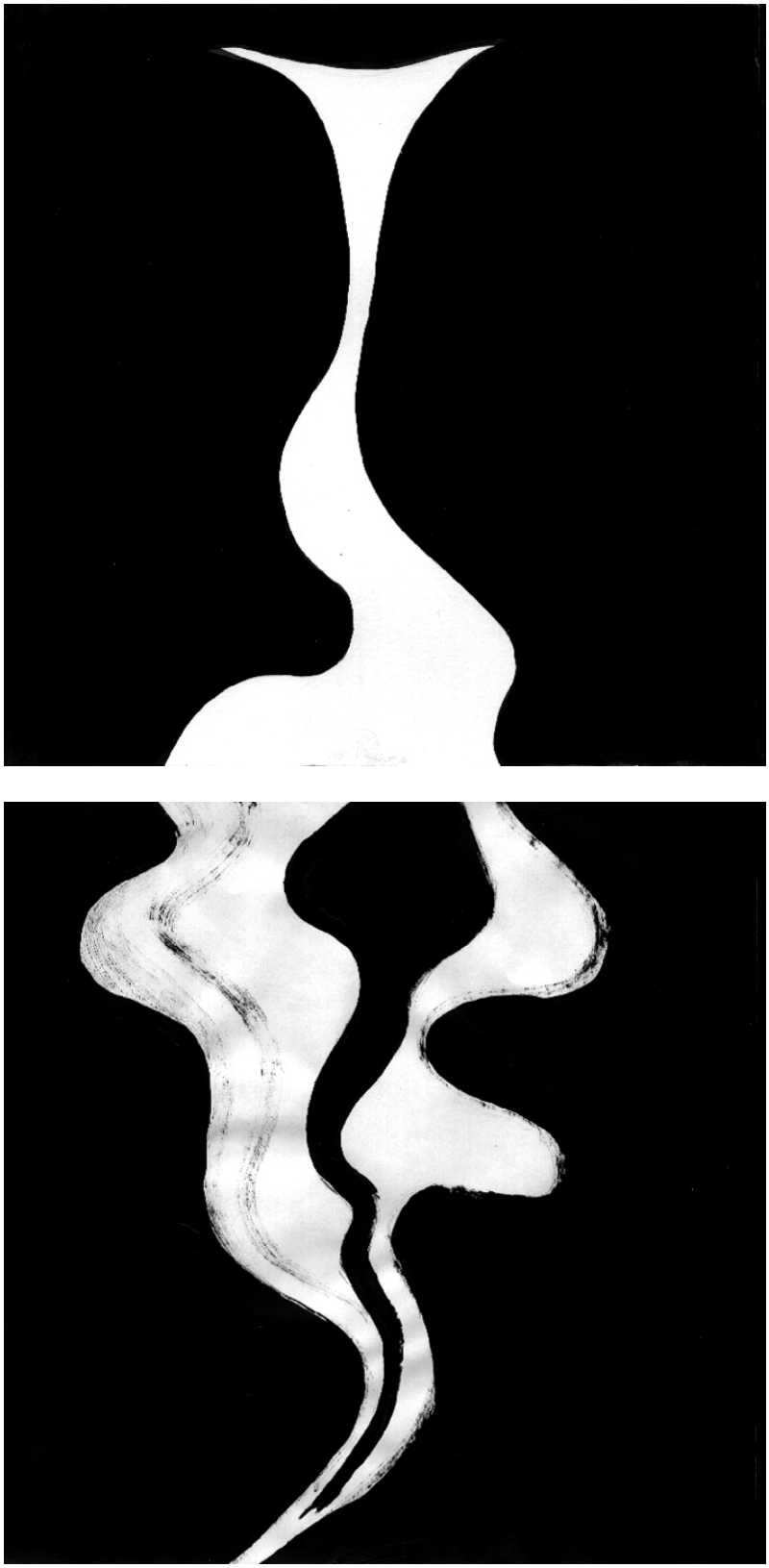


Figure 15

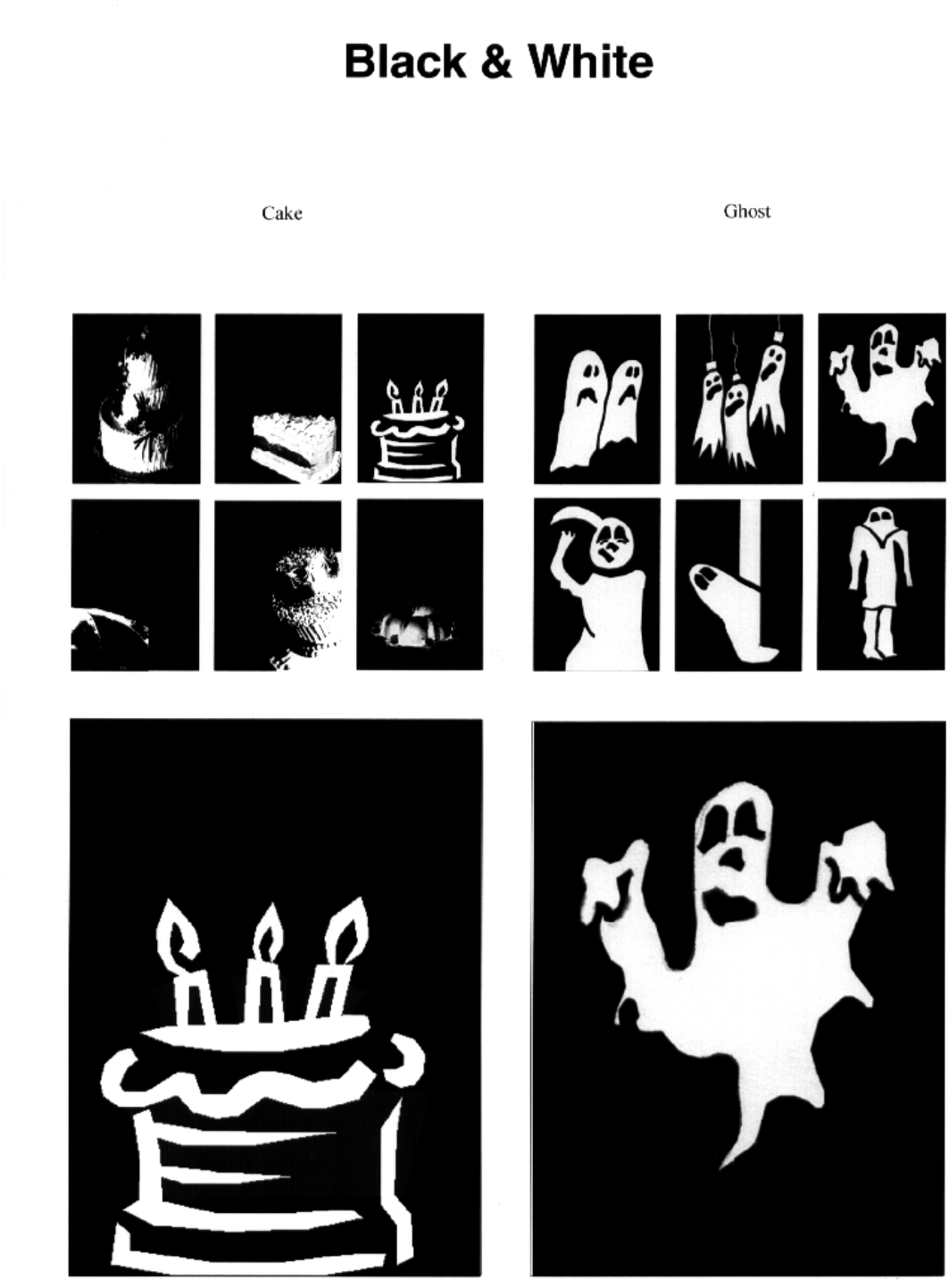


Figure 16

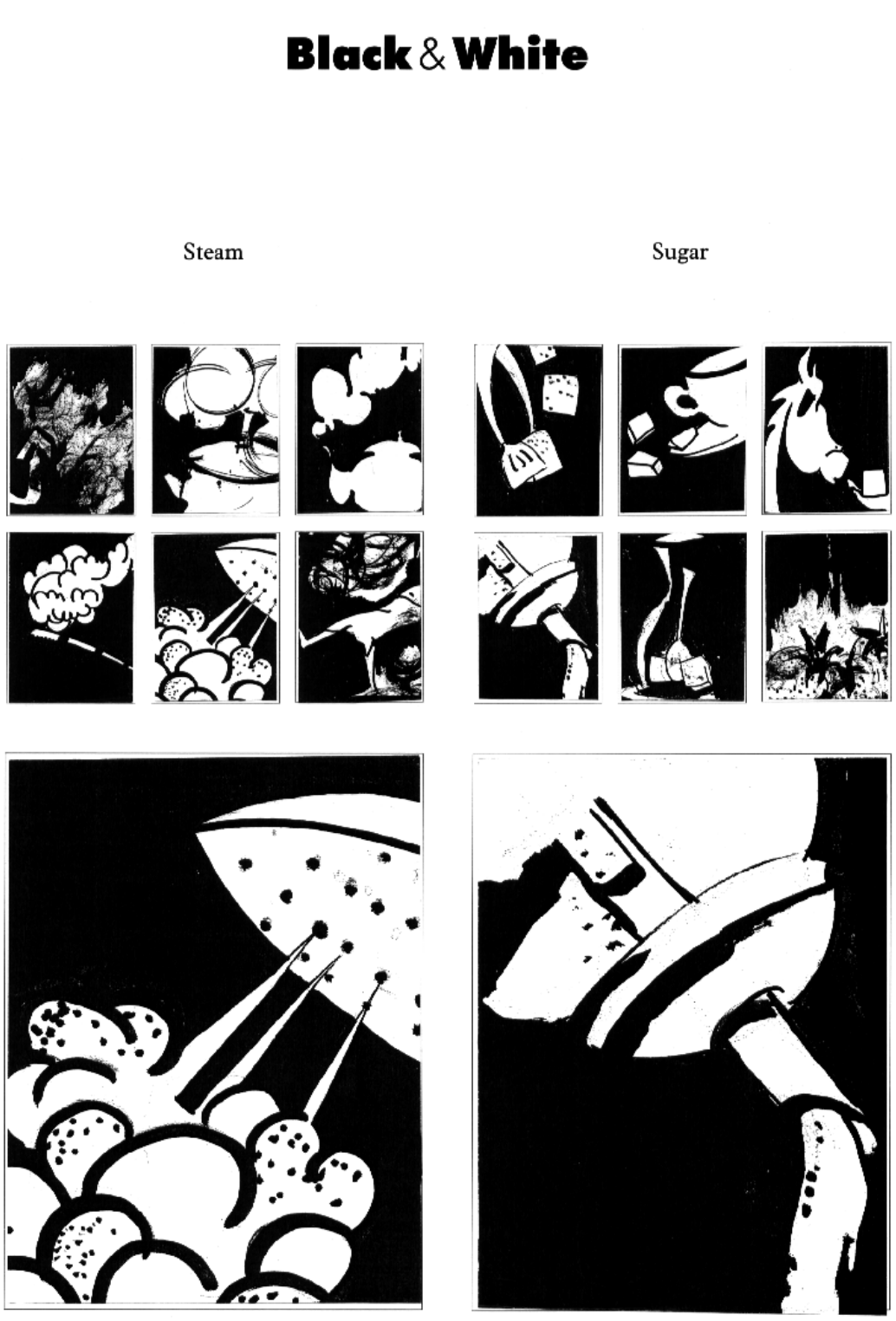
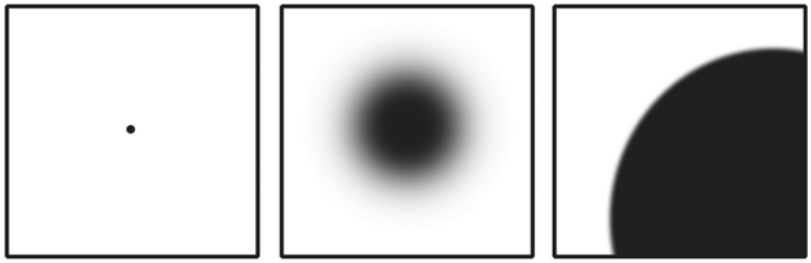


Figure 17

4.5. CLASSWORK NO 4



CLASSWORK NO 4: Make a transformation in 3 squares 25x25cm.
In this task you can use sme direct ways of transformation such as:
Transparency, hiding, disguising, metamorphosis, enlargement, dissolving.

Figure 18

The forth class work was a project on transformation. We mentioned the students some direct ways, which will lead them to transformation as you see in the project description. This project was formed for the purpose of enforcing conceptual thinking and for the use of visual data and memory collected. Students had to use processes, phenomena, and situations that they were surrounded by, in order to find the solution of the problem.

Again, they started to work on the project with a lot of complains and finished it wit great deal of interest, satisfaction and joy because the solutions were quite good once again.

In that project I have seen the effect of my endless speeches about the importance of visual awareness and observation. They all came up with interesting and creative ideas. The success rate of the project was %80 to %20 but this time the quality and the content of the works was quite high.

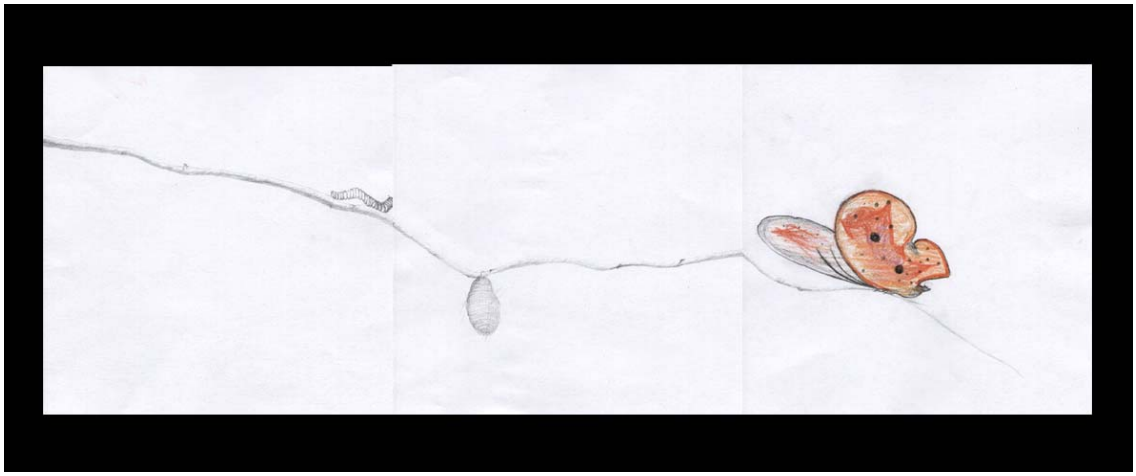


Figure 19

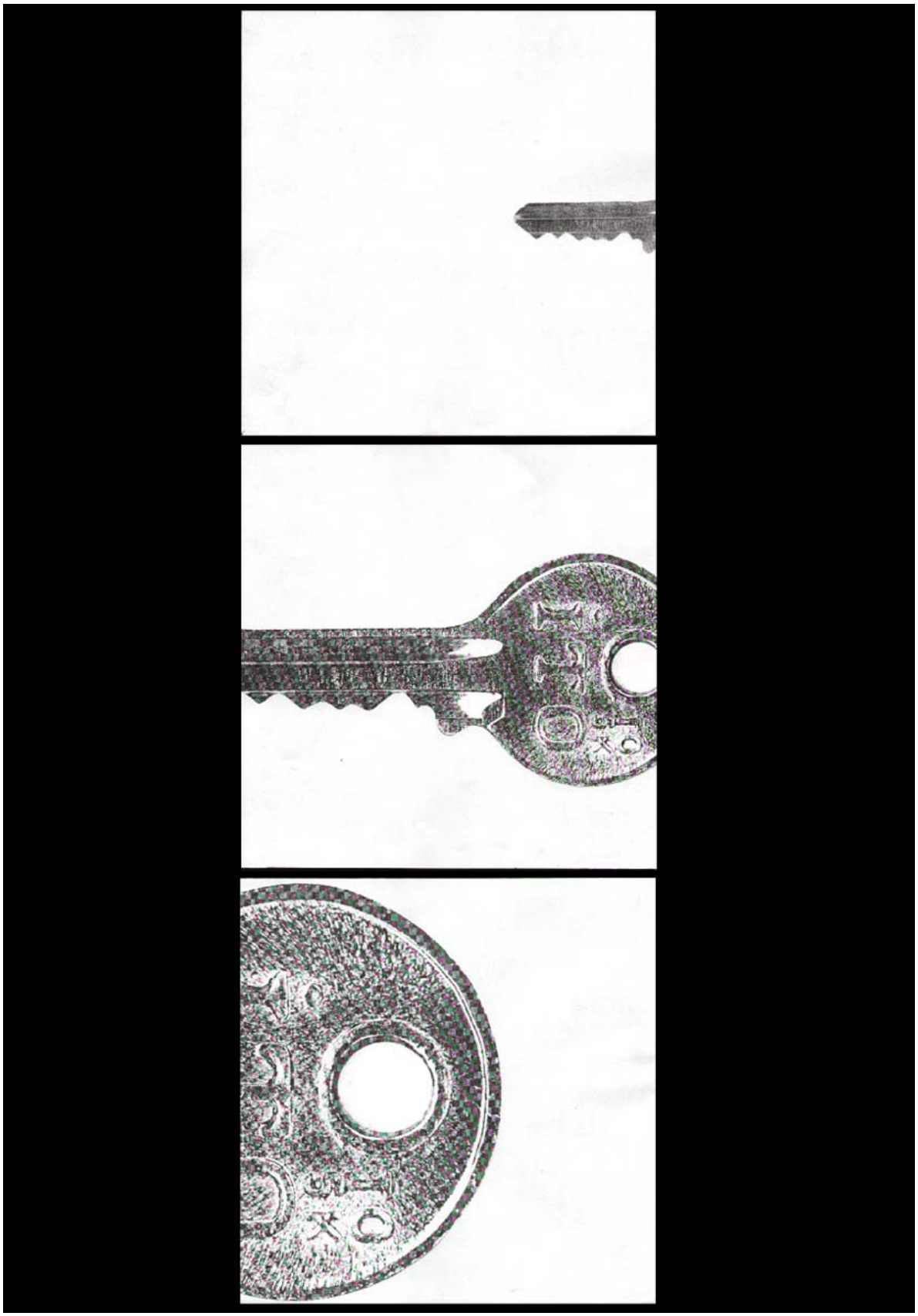


Figure 20

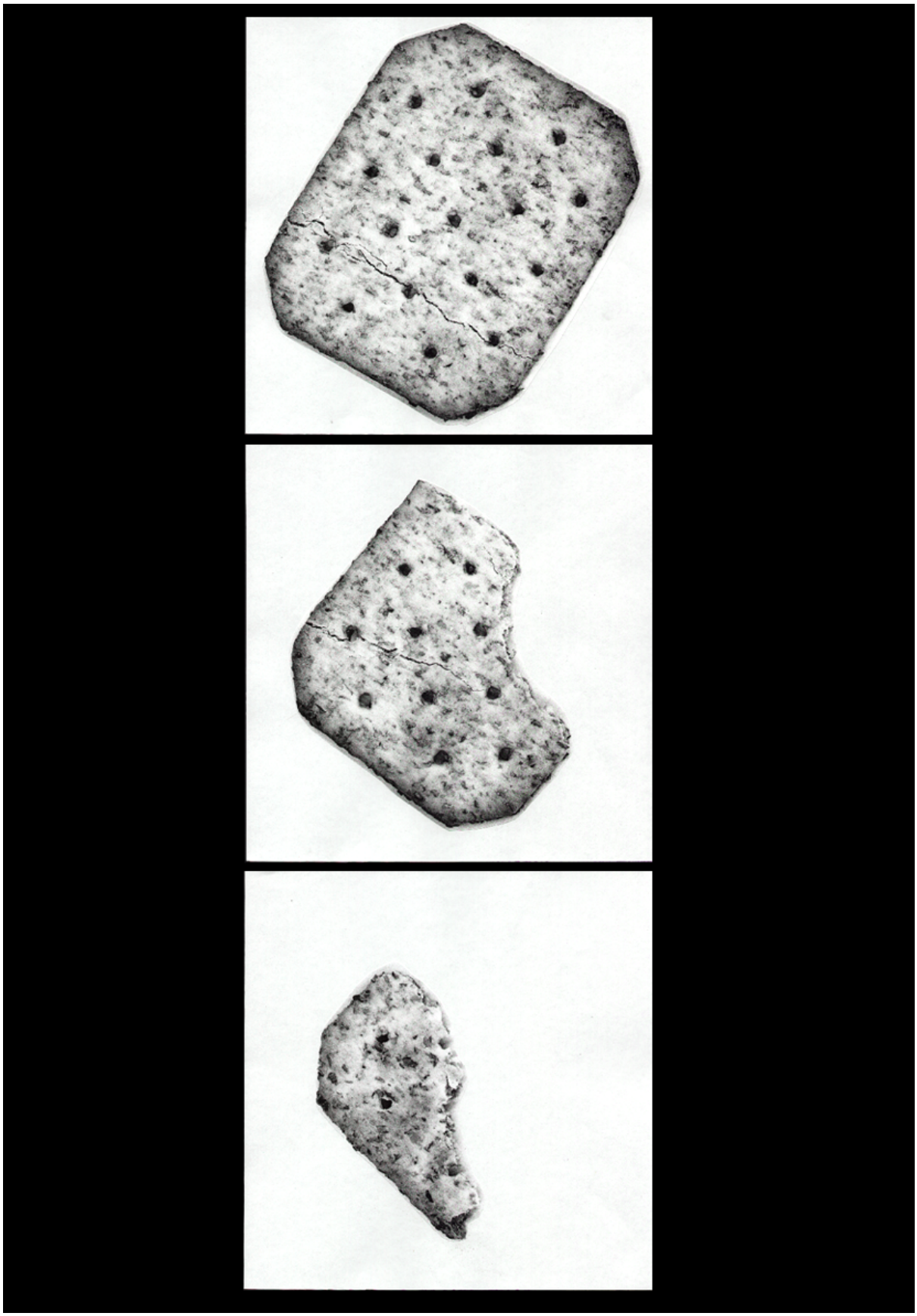


Figure 21

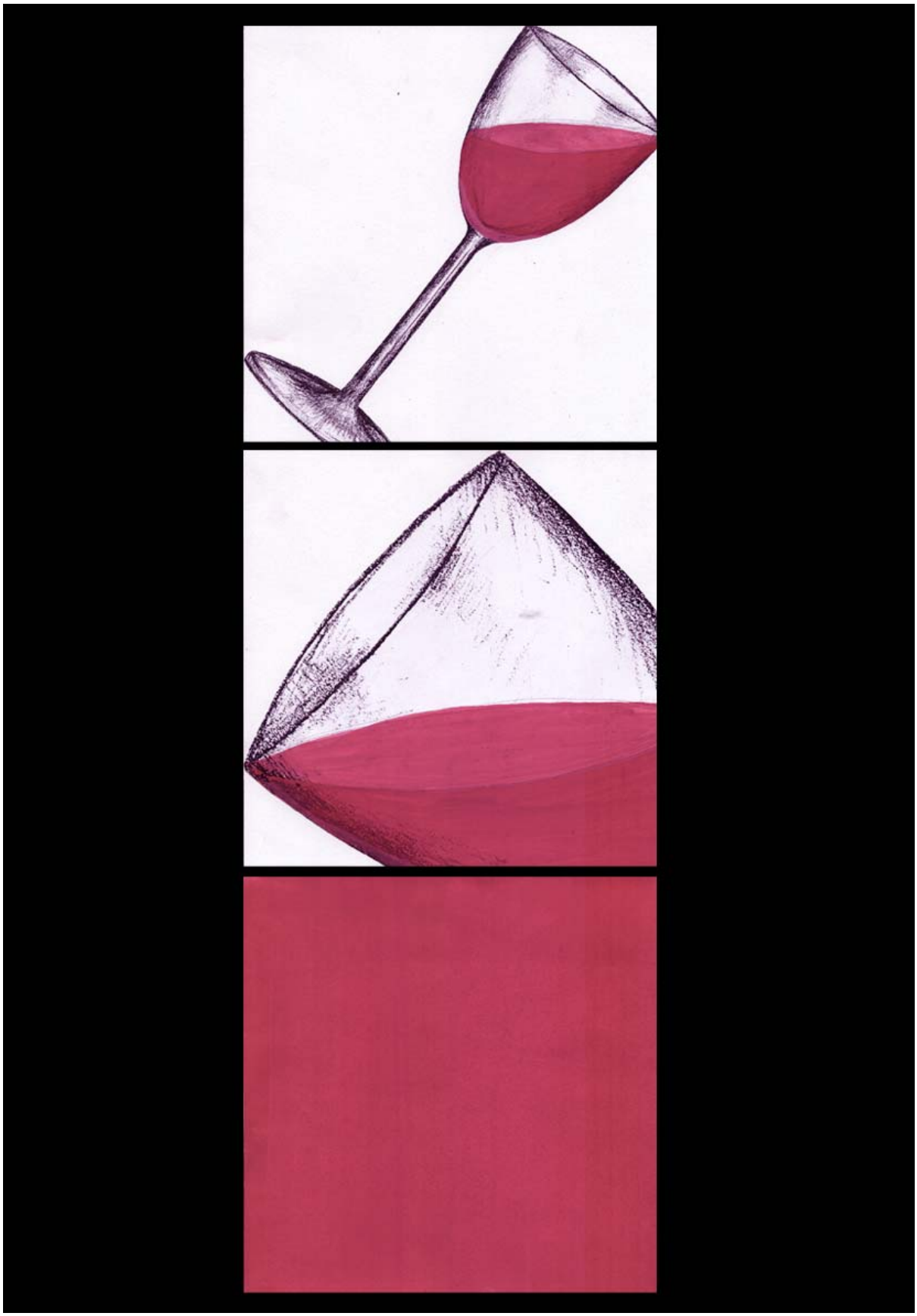
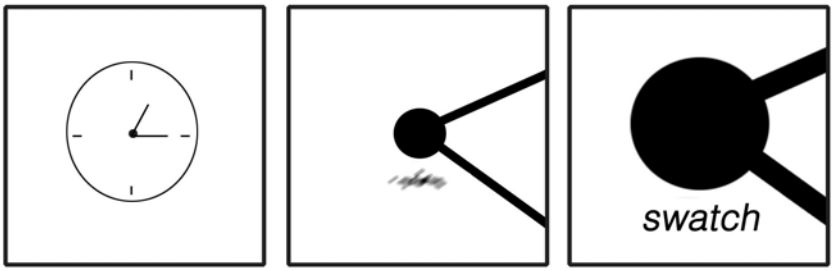


Figure 22

Figure 23

4.6. CLASSWORK NO 5



CLASSWORK NO 4: Create a story based on the concept of time flow in 3 squares.
In this project you will have to use emphasis as a principle of design.
You can use emphasis as a point of interest, a point of visual impact.
It has to punctuate what ever you feel that is important.
With this principle bare in mind that you can control
the view point of the observer.

Figure 24

The fifth classwork became a real problem. May be the time was not enough for that kind of an exercise because I must confess that it was a difficult task.

Students had to build a story explaining time flow as a concept and at the same time they had to use emphasis as a principle of design.

We gave this exercise for them to see the ways of building connection between a design principle and a concept. This exercise was very challenging and interesting but at the same time difficult. The result was not bad but not that good too especially in terms of quality.

Whatever the result is, students faced with that kind of a problem, which will take them a step further. In the class work no 4 they have faced the problem of building a sequence in a continuous way, also the use of transformation is very often seen in graphic design. In this exercise we added one more element into the pot, which is a design principle: emphasis.

The success rate of the exercise was %60 to %40.

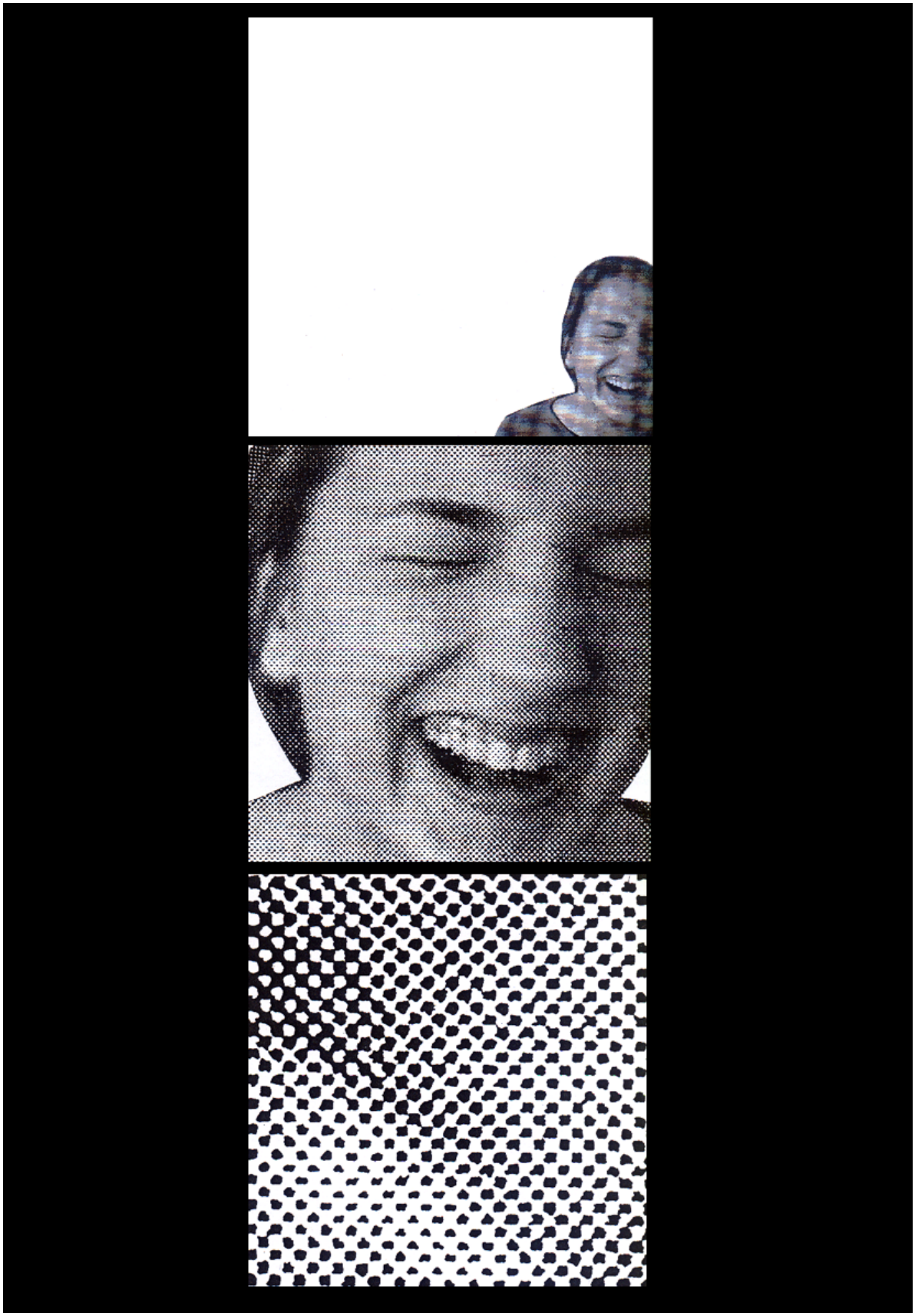


Figure 25

Figure 26

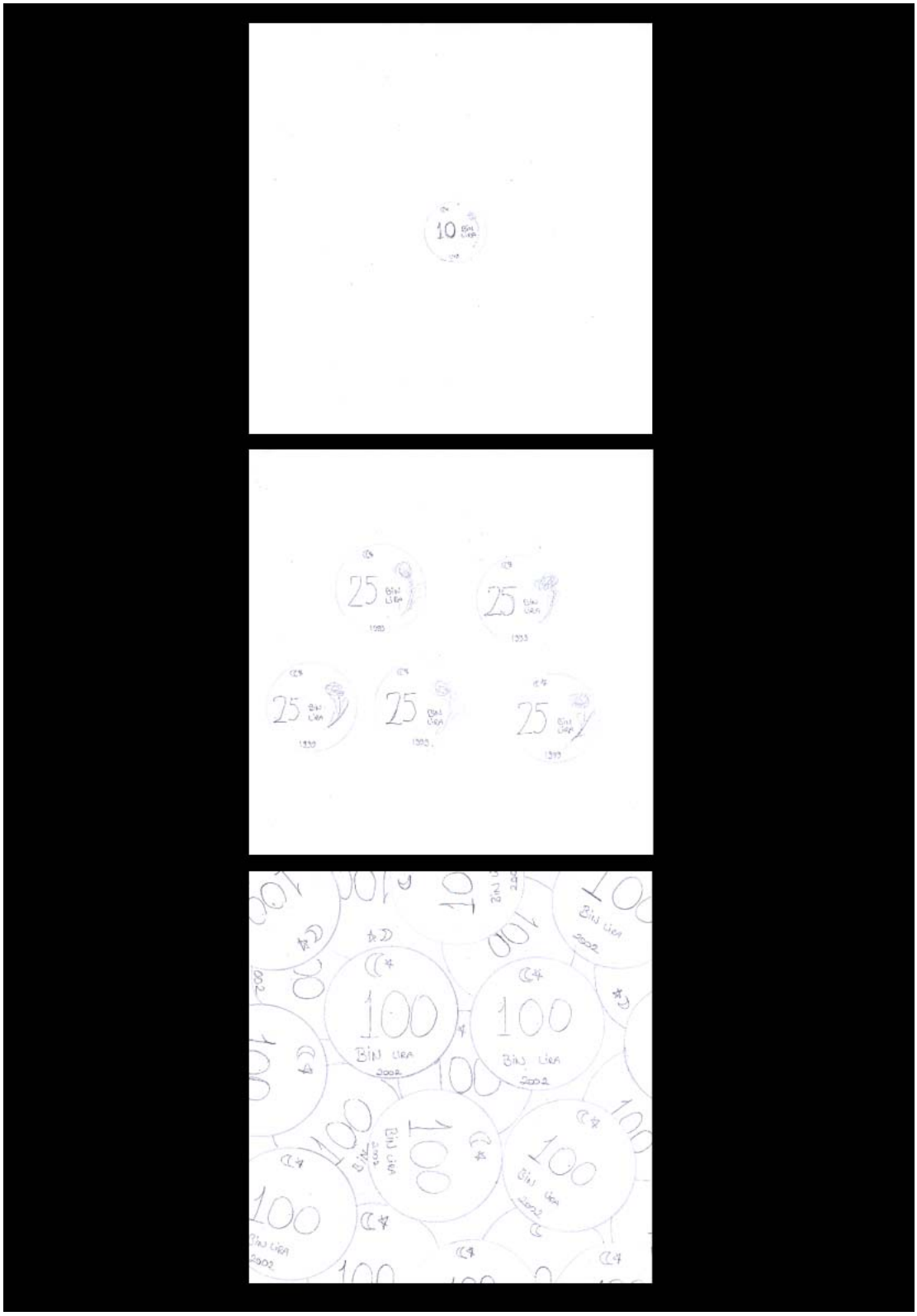


Figure 27

In each of the classworks we have tried to cover one or more design principles. We asked students to build their compositions on a conceptual basis.

The nature of the exercises and the way we posed them required many sketches. This way we encouraged them to be creative. The final work again was in the form of a sketch. We designed the exercises in an unusual and challenging way in order to keep student's interest alive and we let them discover the principles while looking for solutions to the problem. They have seen the notion that we were trying to teach inside their own project.

The necessity of sketching and the necessity of brainstorming for each problem made the students see the problem from many different points of views. This situation again enforced their creativity. Looking at the problem from different point of views is one of the basics of the creative process.

The students also became aware of the importance of observation, because they had to use it for every assignment.

Discovering principles instead of storing or memorizing them, kept the students more active throughout the problems they are facing.

Sketching as much as possible became an habit for them, but this habit can disappear very quickly if they do not keep on working that way during the rest of their education.

In order to see if they carried the knowledge that they had during that study, I prepared a second questionnaire, which can be seen as a conclusion to that study. I gave that questionnaire to the students at the end of the second semester, two weeks after the experimental projects were completed. I intentionally let two weeks time between the questionnaire and finishing time of the projects because I wanted to see the exact effect of the projects and the issues covered.

4.7. QUESTIONNAIR NO 2

You can answer to the questions below either by drawing or writing

1-Please write down three of the basic design principles.

%95 of the students gave the correct answer to the question.

2- Please write down three of the basic design elements.

%95 of the students gave the correct answer to the question.

3-What is negative space?

%100 of the students gave the correct answer to the question.

4-Please write down three direct ways of transformation

%95 of the students gave the correct answer to the question.

5-What is emphasis in design?

%100 of the students gave the correct answer to the question.

The most interesting and surprising result of this questionnaire was that the students preferred sketching instead of writing as answers.

5. Conclusion

In this study, the aim was to find direct ways of enforcing creativity in basic design studio. In order to do that, I first of all, tried to understand the inner dynamics of the creative process. During the process there are some other elements that are as important as the process itself such as: Visual awareness, data gathering, observation and judgement.

Since creative process is simply, problem solving or a person's ability to produce something that has not produced before. It can be considered as a suitable ground for a graphic design education because graphic design is also a way of problem solving. It is not easy to enforce creativity because it is a process that has to be exercised. Being creative is not totally a gift, it is an ability that every single human being posses and develop but there are also some boundaries and limits that is coming from every person's experience of life such as selective perception, categorization and literal dominance. Of course there are some creativity enhancing techniques like brainstorming and in graphic design, sketching, creative pause, simple focus, challenge, alternatives, provocation. (De Bono, 1992)

In this study we also used creativity as a tool to keep students more interested in to the matters of design because during the study we have seen that all students are having problems in carrying the knowledge that they had from one studio to an other. The reason of that was basically the lack of interest. The first questionnaire that we gave to the students showed that they simply could not remember the notions that they had during the first semester. The reason of that situation is that students cannot make sense of the design principles and elements that they have seen and also: they cannot link one notion to another in order to use them as a whole.

Since we want to see visually literate designers, we first of all must make them remember and make meanings of every single thing that they have learned, we have to show them a path that will lead them to become a visual communicator. In that sense our mission has become much more important, we decided to form an experimental program that will try both to enforce creativity and make students carry data gathered. While designing experimental projects we were aware of the uselessness of knowledge storage and direct mentioning or memorizing. So the first thing that we did was to change the “interface” of the exercises. We have presented them in an interesting, challenging and different way. We showed them as games or puzzles in order to keep students interests alive. The projects given, were still trying to make students see design principles and elements but the way we presented them was different. We also encouraged the students to make many sketches for one project and we observed every stage of their problem solving and tried to help them by giving necessary criticisms, we asked them to build their answers on a conceptual base and that was also an attempt to push them to be creative. While making those projects students discovered the principle that the exercise try to give. Discovery is the best way to learn because once they see the principle within their own project they never forget it.

The program was consisted of five projects and two questionnaires, though it was a short term program, after the second questionnaire we

have seen that it was very useful because this time students have been able to make sense of the data they gathered, also they came up with quite innovative and creative solutions to the problems given, as an additional surprise they had a sketching habit. Though they had enough with the speeches about the importance of observation, they started to observe the world that they are living in for the purpose of using it later on.

Such a program can be much more promising if it can be applied in a larger time, for example two years, the result in that case can be very fruitful. Such an active program will help creating self confident, aware and visually literate designers.

BIBLIOGRAPHY

Adams, James. The Care and Feeding of İdeas: A Guide to Encouraging Creativity. Addison-Wesley,1986

Arnston, Amy E. Graphic design basics. New York:Dryden Press,1988

Bacus,Anne. Developpez Votre Creativite. Marabout Alleur,1992

Csikszentmihalyi, Mihaly. Creativity: Flow and The Psychology of Discovery and Invention. New York: Harper Collins Publishers,1996

De Bono, Edward. Lateral Thinking : A Textbook of Creativity. New York: Ward Lock Educational,1970

De Bono, Edward. Serious Creativity. London: Harper Collins,1993

Dural,Tuğyan Aytaç. Theatre as a Paradigm for Introductory Architectural Design Education.Ankara: METU Faculty of Architecture Press,2002

Erlbaum, Lawrence. Modeling Creativity and Knowledge Based Creative Design. Hillsdale,1992

Freud, Sigmund. On Creativity and Unconscious. New York: Harper, 1958

Gardner, Howard. Art, Mind and Brain. New York: Basic Books,1982

Gryskiewicz, Stanley S. Developing Climates For Creativity, Innovations. San Francisco: Jossy-Bass,1999

Henning, Edward B. Creativity In Art and Science. Ohio: Cleveland M. 1987

Kirton, Michael J. Adaptors and Innovators. London: Routledge,1989

Kumsha, Mel. An art project guidebook. Duluth: Summak Publishing,1988

Marek, Tadeusz. Psychological Mechanizms of Human Creativity. Eburon, 1993

Moravcsik, J.M.E. Meaning, Creativity and the Partial İncrutability of The Human Mind. California: Stanford Publications,1998

Rothenberg, Albert. The creativity Question. Durham: Duke University Press,1976

Runco, Marc A. Theories of Creativity. Sage Publications,1990

Runco, Mark A. Problem Finding, Problem Solvingand Creativity. Norwood: Ablex Publications, 1994

Smith, R. Charles. Basic Graphic Design. New York: Basic Books, 1983

Sternberg, Robert J. The Nature of Creativity. Cambridge University Press,1988

Thiel, Philip. Visual Awareness and Design. University of Washington Press,1983

Taylor, Irving A. Perspectives in Creativity. Chicago: Aldine Publications,1975

Ward, Thomas. Creativity and the Mind: Discovering the Genius Within. New York: Plenum Press,1995